

MONTANA



PUBLIC EMPLOYEES' RETIREMENT BOARD
A COMPONENT UNIT OF THE STATE OF MONTANA

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEAR ENDED JUNE 30, 2019

STATE OF MONTANA

Public Employees' Retirement Board
Component Unit of the State of Montana

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

Prepared By:
The Fiscal Services Bureau
Public Employee Retirement Administration
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Table of Contents

Introductory Section

Letter of Transmittal	5
Highlights	11
Public Employees' Retirement Board	13
Montana Public Employee Retirement Administration Organizational Chart	14
Professional Consultants	14

Financial Section

Independent Auditor's Report	15
Management's Discussion & Analysis	18
Basic Financial Statements:	
<i>Statement of Fiduciary Net Position - Pension Trust Funds</i>	36
<i>(The notes to the financial statements are an integral part of this statement)</i>	
<i>Statement of Changes in Fiduciary Net Position - Pension Trust Funds</i>	38
<i>(The notes to the financial statements are an integral part of this statement)</i>	
<i>Notes to the Financial Statements</i>	40
Required Supplementary Information:	
Schedule of Changes in Multiple-Employer Plans Net Pension Liability/(Asset)	96
Schedule of Changes in Single-Employer Plans Net Pension Liability/(Asset)	102
Schedule of Net Pension Liability/(Asset) for Multiple-Employer Plans	104
Schedule of Net Pension Liability/(Asset) for Single-Employer Plans	108
Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans	110
Notes to Required Supplementary Information (GASB No. 67)	116
Schedule of Employer Contributions for Single-Employer Plans	118
Schedule of Investment Returns for Multiple-Employer Plans	120
Schedule of Investment Returns for Single-Employer Plans	121
Schedule of Total OPEB Healthcare Liability and Related Ratios, Last Ten Fiscal Years ...	122
Notes to Required Supplementary Information for OPEB (Healthcare)	123
Notes to Required Supplementary Information (Funding)	124
Supporting Schedules:	
Schedule of Administrative Expenses	126
Schedule of Investment Expenses	127
Schedule of Professional/Consultant Fees	128
Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd)	130
Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd)	131
Detail of Fiduciary Net Position (PERS-DCRP and PERS-DCEd)	132
Detail of Changes in Fiduciary Net Position (PERS-DCRP and PERS-DCEd)	133

Table of Contents

Investment Section

Board of Investments' Investment Letter	135
Report on Investment Activity	136
Total Rates of Annualized Returns by Asset Class	137
Schedule of Largest Holdings	144
Investment Summary	150

Actuarial Section

Actuary's Certification	153
Summary of Actuarial Assumptions and Methods	157
Schedule of Active Member Valuation Data	162
Schedule of Active Member Composition	164
Schedule of Retiree Member Composition	165
Schedule of Beneficiary Member Composition	166
Schedule of Disabled Member Composition	167
Schedule of Converted Disabled Member Composition	168
Schedule of Retirees and Beneficiaries Added to and Removed from Rolls	170
Solvency Test	172
Schedule of Funding Progress	175
Summary of Actuarial (Gain)/Loss by Source	178

Statistical Section

Summary of Statistical Data	181
Changes in Fiduciary Net Position, Last Ten Fiscal Years	182
History of Actuarial Liabilities	191
Schedule of Fair Values by Type of Investment, Last Ten Fiscal Years	194
Schedule of Contribution Rate History	203
History of Membership in Retirement Plans, Last Ten Fiscal Years	206
Schedule of Benefit Expenses and Refunds by Type, Last Ten Fiscal Years	208
Schedule of Distributions Processed, Last Ten Fiscal Years	212
Schedule of Retired Members by Type of Benefit	214
Schedule of Active Members by Age and Gender	220
Schedule of Retired Members by Age and Gender	221
Average Benefit Payments, Last Ten Fiscal Years	222
Schedule of Average Monthly Benefit Payments, All Retirees	232
Principal Participating Employers	234
Schedule of Participating Employers	238

Mission Statement of the PERB

The Montana Public Employees' Retirement Board, as fiduciaries, administers its retirement plans and trust funds, acting in the best interest of the members and beneficiaries.

Mission Statement of the MPERA

The Montana Public Employee Retirement Administration efficiently provides quality benefits, education and service to help our plan members and beneficiaries realize a successful retirement.

VISION

To be the best through outstanding communication, education, customer service, and financial stability.

VALUES

Service We strive to provide excellent service that is timely, accurate, thorough, and accessible. Members and employers should receive the best service possible.

Integrity We conduct business in an honest, ethical, and fair environment. We adhere to the highest standards of professional and ethical conduct.

Respect We acknowledge that our dedicated employees are essential to our success. We value the unique contributions of individuals and encourage mutual respect, civility, diversity, and personal development.

Accountability We take ownership and responsibility for our actions and their results. We are fiscally responsible and performance oriented.

Innovation We seek creative solutions to long-range situations and everyday issues. We are willing to embrace change and consider new ideas.

Teamwork We work together to achieve common goals. We are committed to sharing both risks and rewards; we value openness and flexibility.

GOALS

Provide exceptional communication and education to our membership.

Utilize the most current technology effectively and efficiently to manage the MPERA.

Encourage teamwork and training to provide workflow continuity as staffing evolves.

Support the Montana State Legislature regarding laws impacting the MPERA and its members.

INTRODUCTORY SECTION

MONTANA PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION



December 6, 2019

The Honorable Steve Bullock
Governor of Montana
Room 204, State Capitol
PO Box 200801
Helena, MT 59620-0801

Dear Governor Bullock:

The Public Employees' Retirement Board (PERB) and its staff, the Montana Public Employee Retirement Administration (MPERA), are pleased to submit this Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2019, in accordance with § 19-2-407, Montana Code Annotated. The purpose of this letter is to introduce the basic financial statements and provide an analytical overview of the trust funds' financial activities.

The MPERA management uses a comprehensive framework of internal controls to ensure the accuracy, completeness, and fairness of all disclosures included in the presentation for which they are responsible. The objective is to provide reasonable, not absolute, assurance that the financial statements are free of any material misstatements. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the fiduciary funds administered by MPERA.

For financial reporting purposes, MPERA adheres to accounting principles generally accepted in the United States of America (U.S.). MPERA applies all applicable pronouncements of the Governmental Accounting Standards Board (GASB), including the Management's Discussion and Analysis (MD&A). Defined Benefit, Defined Contribution and Other Employee Benefit transactions are reported on the accrual basis of accounting. Investments are presented at fair value.

The external auditor conducted an independent audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in the Independent Auditor's Report included in the Financial Section on page 15. Management provided the external auditors with full and unrestricted access to MPERA staff to facilitate independent validation of the integrity of the plans' financial reporting.

INTRODUCTORY SECTION

The MD&A immediately follows the independent auditor's report and provides a narrative introduction, overview, and analysis of the financial statements. The MD&A complements this Letter of Transmittal and should be read in conjunction with it.

Profile of the Public Employees' Retirement Board

The PERB is a fiduciary component unit Pension Trust Fund of the State of Montana financial reporting entity. For this reason, the financial statements contained in this report are also included in the State of Montana's CAFR. Fiduciary responsibility for the systems rests with the PERB, which consists of seven members, appointed by the Governor. The members are assigned five-year, staggered terms. They are required to approve a final budget before the beginning of the fiscal year. The MPERA management develops the budget for all plans administered and presents it to the PERB. As governed by statute, the defined benefit administrative expenses may not exceed 1.5 percent of the total defined benefit plan retirement benefits paid. The defined contribution plans are also defined in statute and the funding is provided by the fees assessed on account balances.

The PERB oversees ten separate retirement plans and one Other Post Employment Benefit (OPEB) plan:

- Public Employees' Retirement System - Defined Benefit Retirement Plan (PERS-DBRP) in its 74th year of operation
- Judges' Retirement System (JRS)
- Highway Patrol Officers' Retirement System (HPORS)
- Sheriffs' Retirement System (SRS)
- Game Wardens' and Peace Officers' Retirement System (GWPORS)
- Municipal Police Officers' Retirement System (MPORS)
- Firefighters' Unified Retirement System (FURS)
- Volunteer Firefighters' Compensation Act (VFCA)
- Public Employees' Retirement System-Defined Contribution Retirement Plan (PERS-DCRP)
- Deferred Compensation (457(b)) Plan - may defer money into either a pre-tax account or an after-tax (Roth), or both
- Public Employees' Retirement System - DCRP Disability OPEB (PERS-DCRP Disability OPEB is self-insured and provides a defined benefit disability payment for disabled members of the PERS-DCRP.

2019 Legislative Session

The 2019 Legislative Session concluded on April 25, 2019 with no material impacts to the plan provisions of any of the pension plans. Below are some of the bills that were proposed during the Legislative Session that had non-material impact or would have had material impact, if passed, on the Plans.

House Bill 128: As part of MPERA's constitutional duty to ensure its defined benefit plans amortize in under 30 years, MPERA proposed a statutory funding amendment of 2% employer increase in contributions in House Bill 128 for the Game Wardens' and Peace Officers' Retirement System (GWPORS) funding. This proposal failed to pass out of the House Appropriations Committee on

February 14, 2019. Had the 2% increase become law, the GWPORS plan's amortization period was projected to decrease from 72 years to 23 years.

House Bill 642: Was introduced in order to revise the current penalty statute used by MPERA to assess penalties on delinquent employer contributions. This bill failed to pass second reading on the House Floor and did not become law this past legislative session. If this bill would have passed it would have amended MPERA's current penalty mechanism under Montana Code Section 19-2-706 of "9% a year or \$10 a day, whichever is greater" to a flat 10% a year plus the current federal prime rate for bank prime loans in effect on June 1st and December 1st of any given calendar year.

House Bill 715: A long-term budget stabilization study in House Bill 715 was introduced in order to direct the Legislative Finance Committee to conduct public pension stress testing as a part of a larger study of fiscal and economic conditions during the legislative interim. This was signed by Governor Steve Bullock and became law on May 8, 2019.

Economic Condition and Outlook

Investments

The economic condition of the defined benefit plans is based primarily upon investment earnings. The plans are required by law to be maintained on an actuarially sound basis which protects participants' future benefits. A summary of the investment activity can be found in the *Investment Section* of this CAFR on page 135.

Annualized Time-Weighted Rates of Return (Net of Fees) Average of all Defined Benefit Plans			
1 Year	3 Year	5 Year	10 Year
5.71%	8.80%	6.57%	9.86%

The investment portfolio mix at fair value under the CAPP as of June 30, 2019 for the PERS-DBRP:

Domestic Equity	International Equity	Private Equity	Cash Equivalents (short-term)	Domestic Fixed Income	Real Estate	Natural Resources
28.86%	17.25%	11.95%	2.95%	28.58%	7.50%	2.91%

See MD&A, starting on page 18, and *Investment Section*, page 135, for more detailed analysis and information. The Plan's investment outlook is long term, allowing the portfolio to take advantage of the favorable risk-return characteristics of domestic equities by placing more emphasis on this category.

Funding

The primary funding objectives of the PERB for the pension trust funds are to: 1) ensure that the systems are financially sound and pay all benefits promised using assets accumulated from required employer and member contributions and investment income; and 2) achieve a well-funded status with a range of safety to absorb market volatility without creating an Unfunded Actuarial Liability (UAL). PERB's long-term goal is for all retirement systems to be 100% funded and up to 120% funded to

INTRODUCTORY SECTION

allow a reserve in times of slow markets. The PERB's short-term goal is to obtain actuarial soundness for the plans that do not amortize in 30 years or less.

The information received from the annual actuarial valuation is used by the PERB to recommend funding increases or plan changes or both to the Legislature to address financial sustainability. The contribution rates are statutorily set through the Legislature. The rate of the employer contributions to the plans is composed of the normal cost, amortization of the UAL, and a load for administrative expenses. The administrative expense load is based upon an expense amount expected to occur during the year for each Plan.

The funded status of all the MPERA administered retirement systems increased in fiscal year 2019, with the exception of the JRS which had a slight decrease. A single year's funded ratio, by itself, does not provide a measure of the funding direction. The status and funding progress of the defined benefit retirement systems is shown in the table at the bottom of the page. This information also appears for the defined benefit retirement systems in the *Actuarial Section* of this report on pages 176-177. The PERS-DCRP Disability OPEB schedule of funding progress can be found on page 175.

GASB 67 - Accounting

Funds are accumulated to meet future benefit obligations to retirees and beneficiaries. This accumulated balance is referred to as the "net position restricted for pension benefits" in the Statement of Changes in Fiduciary Net Position – Pension Trust Funds in the *Financial Section*, page 38 of this report. The total pension liability is not reported in the basic financial statements; however, it is disclosed in Note 4 to the basic financial statements and in the required supplementary information. The total pension liability is determined by the actuary and is a measure of the present value of actuarial accrued liabilities estimated to be payable in the future to current retirees and beneficiaries. The net pension liability is measured as the total pension liability less the amount of the pension plan's fiduciary net position. The net pension liability is an accounting measurement for financial statement purposes. The plan fiduciary net position as a percentage of the total pension liability for each plan is shown in the table below. This information also appears in Note 4 to the basic financial statements and in the required supplementary information. The PERS-DBRP Fiduciary Net Position does not include the Education component.

(dollars in thousands)		Actuarial Valuation (Funding)	GASB 67 (Accounting)
System	Fiduciary Net Position	Funded Status	FNP as % of TPL
PERS-DBRP	\$ 5,903,306,248	74.19%	73.85%
JRS	\$ 104,885,637	161.23%	160.58%
HPORS	\$ 152,777,627	64.55%	64.27%
SRS	\$ 377,222,848	81.56%	81.89%
GWPORS	\$ 206,346,965	84.24%	83.54%
MPORS	\$ 439,777,930	69.23%	68.84%
FURS	\$ 461,189,143	79.97%	80.08%
VFCA	\$ 39,866,038	84.76%	85.23%
DC Disability OPEB	\$ 5,137,296	104.93%	N/A

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Montana Public Employees' Retirement Board for its comprehensive annual financial report for the fiscal year ended June 30, 2018. This was the twenty-first consecutive year that the Montana Public Employees' Retirement Board has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government entity must publish an easily readable and efficiently organized Comprehensive Annual Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

MPERA also received the Public Pension Coordinating Council (PPCC) Public Pension Standards Award for 2019 in recognition of meeting the professional standards for plan administration set forth in the Public Pension Standards. This is the seventeenth year the PPCC is offering the PPCC Standards Award Program to public retirement systems and the fourteenth time MPERA has received the PPCC award. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, as well as serve as a benchmark by which all defined benefit public plans should be measured.

Acknowledgments

The compilation of this report reflects the effort of the MPERA Fiscal Services Bureau accounting staff. This report is intended to provide complete and reliable information to facilitate the management decision process, serve as a means of determining compliance with legal provisions, and to serve as a means of determining responsible stewardship of the plans' funds. MPERA received an unmodified opinion from our independent auditors on the financial statements included in this report. This opinion provides assurance that the financial statements can be relied upon.

We would like to take this opportunity to express our gratitude to the staff, the advisors, and the many people who have worked so diligently to assure the successful operation of the plans.

Respectfully submitted,

/s/ Dore Schwinden

Dore Schwinden, Executive Director
Montana Public Employee
Retirement Administration

/s/ Marty Tuttle

Marty Tuttle, President
Montana Public Employees'
Retirement Board



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
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Presented to

**Montana Public Employees'
Retirement Board**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2019***

Presented to

Montana Public Employee Retirement Administration

In recognition of meeting professional standards for
plan administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Fiscal Year 2019 Highlights

Membership (Table on Page 67)	DB Plans	DC & 457 Plans*
Active Members	35,450	7,793
Inactive Vested Members	5,143	5,177
Inactive Members	20,653	713
Service Retirement Members	26,891	111
Disability Retirement Members**	228	10
Survivor Benefits	612	2
TOTAL	88,977	13,806

*The Inactive, Service, Disability, and Survivor are DC members, not 457 members, the PERB does not have that information.

**The ten disability retirements in the DC and 457 Plans column are in the PERS-DCRP Disability OPEB Plan, which is a Defined Benefit Plan.

Contributions	DB Plans	DC & 457 Plans
Employer	\$ 144,610,967	\$ 13,093,846
Plan Member (Employee)	\$ 128,856,430	\$ 37,072,266
State	\$ 36,188,042	\$ 87,294
Interest Reserve Buyback (Interest on Service Purchases)	\$ 122,625	
Retirement Incentive Program	\$ 1,221	
State Appropriation	\$ 33,615,000	
Nonvested Member Forfeitures (PERS-DCRP)		\$ 714,024
Miscellaneous Revenue	\$ (116,673)	\$ 689,973
TOTAL	\$ 343,277,612	\$ 51,657,403

Distributions	DB Plans	DC & 457 Plans
Benefits Paid (Includes \$97,076 DCRP Disability OPEB Plan)	\$ 520,156,526	
Refunds Paid (DB Plans) / Distributions Paid (DC & 457 Plans)	\$ 19,109,756	\$ 37,948,641

Investments	DB Plans	DC & 457 Plans
Net Investment and Securities Lending Income	\$ 415,158,155	
Investment Rate of Return (12 month period) ¹	5.71%	

¹Actuarial investment rate of return is 7.65%

Financial (Note A4. Net Pension Liability of Employers, page 43)	PERS DBRP	All DB Plans
Total Pension Liability	\$ 7,993,617	\$ 10,265,794
Fiduciary Net Position	\$ 5,903,306	\$ 7,685,372
Net Pension Liability	\$ 2,090,311	\$ 2,580,422
Ratio of Fiduciary Net Position to Total Pension Liability	73.85%	74.86%

Funding (Schedule of Funding Progress, pages 176 and 177)	PERS DBRP	All DB Plans
Actuarial Value of Assets	\$ 5,903,191	\$ 7,689,510
Actuarial Accrued Liability (AAL)	\$ 7,957,038	\$ 10,230,915
Unfunded AAL (UAAL)	\$ 2,053,847	\$ 2,541,404
Ratio of Actuarial Assets to Actuarial Liabilities	74.19%	75.16%

INTRODUCTORY SECTION

2019 Operational Highlights

• Processed 1,557 new retirement applications
• Processed 1,845 refund applications
• Member Call Center answered a total of 31,503 calls
• Employer Call Center answered a total of 10,441 calls
• Performed 156 education seminars to 2,906 members

History of Actuarial Investment Rate of Return

July 1, 1964 through June 30, 1966	4.00%
July 1, 1967 through June 30, 1968	4.50%
July 1, 1969 through June 30, 1976	5.50%
July 1, 1976 through June 30, 1982	7.00%
July 1, 1982 through June 30, 1988	8.00%
July 1, 1988 through June 30, 1993 Experience Study (1994)	8.00%
July 1, 1993 through June 30, 1999 Experience Study (2000 valuations)	8.00%
July 1, 1999 through June 30, 2003 Experience Study (2003)	8.00%
July 1, 2003 through June 30, 2009 Experience Study (2010 valuations)	7.75%
July 1, 2009 through June 30, 2016 Experience Study (2017 valuations)	7.65%

History of Funded Ratios

Actuarial Valuation Date	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA	DC Disability OPEB
6/30/2019	74.19%	161.23%	64.55%	81.56%	84.24%	69.23%	79.97%	84.76%	104.93%
6/30/2018	73.81%	161.29%	64.03%	81.04%	82.95%	67.69%	78.27%	82.76%	102.32%
6/30/2017	72.76%	167.06%	64.35%	80.74%	81.01%	68.66%	76.13%	80.56%	87.14%
6/30/2016	77.31%	166.48%	65.84%	83.21%	84.06%	68.79%	78.27%	80.21%	86.83%
6/30/2015	76.14%	163.65%	65.12%	82.62%	84.41%	65.98%	75.51%	75.38%	85.97%
6/30/2014	74.40%	155.07%	63.92%	81.25%	83.72%	62.98%	71.82%	82.37%	
6/30/2013	80.22%	142.82%	60.22%	77.36%	80.08%	58.37%	66.41%	74.79%	80.44%
6/30/2012	67.42%	136.81%	57.59%	74.34%	75.77%	54.77%	61.80%	73.40%	
6/30/2011	70.25%	141.13%	61.17%	76.43%	75.44%	55.23%	61.93%	74.39%	
6/30/2010	74.21%	144.13%	64.30%	81.36%	74.79%	57.19%	63.72%	77.01%	
6/30/2009	83.50%	147.98%	72.31%	89.64%	88.09%	62.08%	68.50%	81.16%	
6/30/2008	90.25%	157.32%	75.36%	97.51%	92.88%	64.82%	71.77%	84.14%	
6/30/2007	91.05%	156.74%	74.63%	97.28%	94.20%	63.88%	69.99%	81.84%	
6/30/2006	88.26%	139.42%	77.85%	94.86%	91.63%	60.43%	65.49%	72.89%	
6/30/2005	85.46%	137.73%	72.65%	93.17%	90.33%	57.68%	63.57%	69.25%	
6/30/2004	86.72%	129.98%	76.01%	94.90%	89.86%	57.48%	62.44%	69.94%	
6/30/2002	99.97%	145.60%	86.17%	113.95%	99.03%	63.27%	68.90%	71.82%	
6/30/2000	125.07%	153.64%	101.85%	143.83%	137.81%	71.68%	76.08%	106.07%	

Public Employees' Retirement Board

*A Component Unit of the State of Montana
as of June 30, 2019*



Left to right: Robyn Driscoll, David Severson, Sheena Wilson, Marty Tuttle, Maggie Peterson, Pepper Valdez, and Julie McKenna.

Marty Tuttle, President

Clancy, Active DC Plan Member
Public Employee
Reappointed 4/1/2019
Term Expires 3/31/2024
Email: Marty.Tuttle@mt.gov

Pepper Valdez, Vice President

Billings,
Active Public Employee
Appointed 7/31/2015
Term Expires 3/31/2020
Email: Pepper.Valdez@mt.gov

David Severson

Missoula
Member at Large
Appointed 4/1/2019
Term Expires 3/31/2021
Email: Dave.Severson@mt.gov

Robyn Driscoll

Billings,
Member at Large
Appointed 6/1/2018
Term Expires 3/31/2023
Email: Robyn.Driscoll@mt.gov

Sheena Wilson

Helena,
PERS Retired Member
Reappointed 6/1/2018
Term Expires 3/31/2023
Email: Sheena.Wilson@mt.gov

Julie McKenna

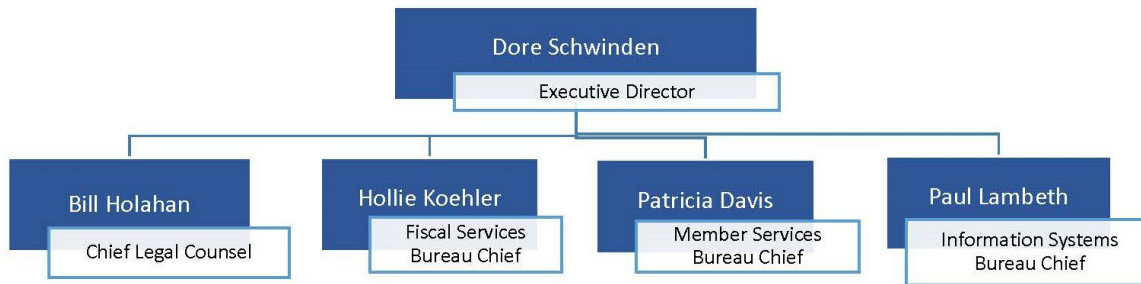
Helena,
Active Public Employee
Reappointed 4/1/2017
Term Expires 3/31/2022
Email: Julie.McKenna@mt.gov

Maggie Peterson

Anaconda, Experience in Investment Management
PERS Board Representative - BOI since 5/1/2018
Reappointed 4/1/2019
Term Expires 3/31/2024
Email: Maggie.Peterson@mt.gov

INTRODUCTORY SECTION

MPERA Management Staff as of June 30, 2019



Principal Professional Consultants

Cavanaugh Macdonald Consulting, LLC

Consulting Actuary
3550 Busbee Pky, Ste 250
Kennesaw, GA 30144

Buck Global, LLC

Defined Contribution Investment Consultants
420 Lexington Ave, Ste 2220
New York, NY 10170

Sagitec Solutions, LLC

Pension Systems Design
422 County Road D East
Saint Paul, MN 55117

State of Montana Legislative Audit Division

Auditors
Room 160, State Capitol Building
Helena, MT 59620-1705

IceMiller

Legal Tax Consultants
One American Square, Ste 2900
Indianapolis, IN 46282-0200

Pension Benefit Information, LLC

Death Validation Services
333 S 7th St, Ste 300
Minneapolis, MN 55402

SHI International Corp

Software Contracted Services
290 Davidson Ave
Somerset, NJ 08873

Montana Department of Commerce Board of Investments

Defined Benefit Plan Investment Management
2401 Colonial Drive, 3rd Floor
Helena, MT 59620-0126

Third Party Administrators (Defined Contribution and 457 Plans)

Pacific Investment Management Company, LLC (PIMCO)

Newport Beach, CA

State Street Bank and Trust Company

Kansas City, MO

Transamerica Premier Life Insurance Company

(Guaranteed Interest Contract (GIC) provider)
Baltimore, Maryland

Prudential Insurance Company of America

(Guaranteed Interest Contract (GIC) provider)
Newark, NJ

Voya Retirement Insurance & Annuity Company

(Guaranteed Interest Contract (GIC) provider)
Windsor, CT

Empower Retirement

Defined Contribution & Deferred
Compensation Recordkeeper
Greenwood Village, CO

FINANCIAL SECTION

LEGISLATIVE AUDIT DIVISION

Angus Maciver, Legislative Auditor
Deborah F. Butler, Legal Counsel



Deputy Legislative Auditors:
Cindy Jorgenson
Joe Murray

INDEPENDENT AUDITOR'S REPORT

The Legislative Audit Committee
of the Montana State Legislature:

Introduction

We have audited the accompanying Statement of Fiduciary Net Position-Pension (And Other Employee Benefit) Trust Funds of the Public Employees' Retirement Board, a component unit of the state of Montana, as of June 30, 2019, and the related Statement of Changes in Fiduciary Net Position-Pension (And Other Employee Benefit) Trust Funds for the fiscal year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this responsibility includes designing, implementing, and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the board's internal control, and accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of

significant accounting estimates made by management, as well as the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Public Employees' Retirement Board as of June 30, 2019, and the changes in fiduciary net position for the fiscal year then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion & Analysis, Schedule of Changes in Multiple-Employer Plans Net Pension Liability/(Asset), Schedule of Changes in Single Employer Plans Net Pension Liability/(Asset), Schedule of Net Pension Liability/(Asset) for Multiple-Employer Plans, Schedule of Net Pension Liability/(Asset) for Single-Employer Plans, Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans, Schedule of Employer Contributions for Single-Employer Plans, Schedule of Investment Returns for Multiple-Employer Plans, Schedule of Investment Returns for Single-Employer Plans, and the Schedule of Total OPEB (Healthcare) Liability and Related Ratios, Last Ten Fiscal Years, and related notes be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The following schedules are supplementary information presented for purposes of additional analysis and are not a required part of the financial statements: Schedule of Administrative Expenses, Schedule of Investment Expenses, Schedule of Professional/Consultant Fees; the Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd); the Detail of Changes in Fiduciary Net Position

(PERS-DBRP and PERS-DBEd); the Detail of Fiduciary Net Position (PERS-DCRP, PERS-DCEd); and the Detail of Changes in Fiduciary Net Position (PERS-DCRP, PERS-DCEd) for the fiscal year ended June 30, 2019. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Other Information

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The Introductory, Investment, Actuarial, and Statistical sections were presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 6, 2019, on our consideration of the board's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the board's internal control over financial reporting and compliance. It is included in the Legislative Auditor's separately issued report (18-08B).

Respectfully submitted,

/s/ Jeane Carstensen-Garrett

Jeane Carstensen-Garrett, CPA
Audit Manager
Helena, MT

December 6, 2019

Public Employees' Retirement Board

A Component Unit of the State of Montana

Management's Discussion and Analysis

This section presents management's discussion and analysis of the Montana Public Employees' Retirement Board's (PERB) financial presentation and performance of the plans administered by the PERB for the fiscal year ending June 30, 2019. It is presented as a narrative overview and analysis and should be read in conjunction with the Letter of Transmittal included in the Introductory Section, the financial statements and other information presented in the Financial Section of this Component Unit Financial Report. Throughout this discussion and analysis units of measure (i.e., billions, millions, thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

Financial Highlights

Summary Statement of Fiduciary Net Position - All PERB Plans								
(in thousands)	Defined Benefit Total		Change		Defined Contribution & 457 Total		Change	
	2019	2018	Amount	Percent	2019	2018	Amount	Percent
Total Assets	\$ 7,730,149	\$ 7,568,979	\$ 161,170	2.1 %	\$ 797,227	\$ 730,994	\$ 66,233	9.1 %
Deferred Outflow of Resources	11	3	8	266.7 %	1		1	
Total Liabilities	37,315	86,675	(49,360)	(56.9)%	1,022	897	125	13.9 %
Deferred Inflow of Resources	59	64	(5)	(7.8)%	9	10	(1)	(10.0)%
Total Fiduciary Net Position Restricted	\$ 7,692,786	\$ 7,482,243	\$ 210,543	2.8 %	\$ 796,197	\$ 730,087	\$ 66,110	9.1 %

The PERB's defined benefit plans combined total fiduciary net position increase of \$210.5 million, or 2.8%, in fiscal year 2019 was primarily driven by total investments of \$7.4 billion.

The PERB's defined contribution plans combined total fiduciary net position increase of \$66.1 million, or 9.1%, in fiscal year 2019 was primarily attributed to the total investments of \$793.2 million. Investments in members' defined contribution assets are self-directed, as participants direct their investment allocation to the various investment options. Therefore, the impact to net investment income is a result of the members' investment choices with varying degrees of risk and return potential.

Summary Statement of Changes in Fiduciary Net Position - All PERB Plans

(in thousands)	Defined Benefit Total		Change		Defined Contribution & 457 Total		Change	
	2019	2018	Amount	Percent	2019	2018	Amount	Percent
Total Additions	\$ 758,437	\$ 957,924	\$ (199,487)	(20.8) %	\$ 106,278	\$ 97,693	\$ 8,585	8.8 %
Total Deductions	547,950	515,586	32,364	6.3 %	40,168	41,533	(1,365)	(3.3) %
Net Increase / (Decrease) in Fiduciary Net Position	\$ 210,487	\$ 442,338	\$ (231,851)	(52.4) %	\$ 66,110	\$ 56,160	\$ 9,950	17.7 %
Prior Period Adjustment	\$ 55	\$ 586	\$ (531)	(90.6) %	\$ 104		\$ (104)	

Below is a breakdown of the Additions and Deductions in the above *Summary Statement of Changes in Fiduciary Net Positions - All PERB Plans*.

(in thousands)	Defined Benefit Total		Change		Defined Contribution & 457 Total		Change	
	2019	2018	Amount	Percent	2019	2018	Amount	Percent
Additions (Major)								
Contributions	\$ 343,278	\$ 342,774	\$ 504	0.1 %	\$ 51,657	\$ 48,798	\$ 2,859	5.9 %
Net Investment Income (Loss)	415,159	615,150	(199,991)	(32.5) %	54,621	48,895	5,726	11.7 %
Deductions by Type								
Benefits and Refunds	539,733	506,017	33,716	6.7 %	37,948	39,048	(1,100)	(2.8) %
Administrative Expenses and Net Other Addition/ Deductions	8,217	9,569	(1,352)	(14.1) %	2,220	2,485	(265)	(10.7) %
Net Increase / (Decrease) in Fiduciary Net Position	\$ 210,487	\$ 442,338	\$ (231,851)	(52.4) %	\$ 66,110	\$ 56,160	\$ 9,950	17.7 %

Defined benefit plan revenues (additions to plan net position) and expenses (deductions to plan net position) for the PERB's fiscal year 2019.

- The Total contributions slightly increased from the prior year by \$504 thousand primarily due to:
 - increases in state contributions;
 - increases in member contributions as a result of a slight increase in the active membership in most defined benefit plans; and,
 - increases in employer contributions as a result of the temporary increase of 0.1% yearly in the PERS-DBRP.
- Though the PERB's defined benefit plans total investments increased \$132.9 million from fiscal year 2018 to \$7.4 billion, the total net investment income decreased from the prior year by \$200.0 million, or 32.5%. The money-weighted rate of return for fiscal year 2019 was 5.64% compared to 8.88% in fiscal year 2018. The 5.64% was below the actuarial assumed rate of return of 7.65% for fiscal year 2019.
- Total benefits and refunds increased by \$33.7 million, or 6.7%, primarily due to an increase in retirees. There were less refunds processed this year.

FINANCIAL SECTION

- The total net other additions and deductions, which includes administrative expenses, decreased by \$1.4 million, or 14.1%, primarily due to a decrease in expenses to administer the plans especially in decreased computer system costs.

Defined contribution plan revenues (additions to plan net position) and expenses (deductions to plan net position) for the PERB's fiscal year 2019.

- Total contributions increased by \$2.9 million primarily due to:
 - an increase in PERS-DCRP member contributions as a result of an increase in active members, and
 - an increase in the employer contributions as a result of the temporary increase of 0.1% yearly in the PERS-DCRP.
- The total net investment income increased from the prior year by \$5.7 million as a result of an increase in members contributing to the plan.
- Total distributions decreased by \$1.1 million due to a decrease in members taking distributions.
- The total net other additions and deductions, which includes administrative expenses, decreased by \$265 thousand due to a decrease of expenses to administer the plans, especially in decreased project costs.

Actuarial Funding Valuations

The PERB's defined benefit plans' funding objective is to meet long-term benefit obligations. As of June 30, 2019, the date of the latest actuarial valuation, four of the plans amortize the Unfunded Actuarial Liability (UAL) in 30 years or less:

- Sheriffs' Retirement System (SRS),
- Municipal Police Officers' Retirement System (MPORS),
- Firefighters' Unified Retirement System (FURS), and
- Volunteer Firefighters' Compensation Act (VFCA).

The plans that do not amortize the Unfunded Actuarial Liability in 30 years or less are:

- Public Employees' Retirement System (PERS),
- Highway Patrol Officers' Retirement System (HPORS), and
- Game Wardens' and Peace Officers' Retirement System (GWPORS).

The Judges' Retirement System (JRS) has an actuarial surplus. This means there are more assets than liabilities in the plan.

It is important to understand that this measure reflects the Actuarial Value of Assets for each defined benefit plan, which is currently greater than the actual fair value published in the financial statements. Investment earnings are critical to the defined benefit plans. The actuary uses a four-year smoothing method to determine the Actuarial Value of Assets. This method is used to reduce the impact of market volatility. Due to smoothing gains in 2016 and 2017, and smoothing losses in 2018 and 2019, return on actuarial value ranged from 6.93% to 7.28% for all systems. These ranges were less than the 7.65% actuarial assumed rate of return on investments, thus creating actuarial experience losses.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the PERB's financial reporting which is comprised of the following components:

- (1) Basic Financial Statements
- (2) Notes to the Basic Financial Statements
- (3) Required Supplementary Information
- (4) Other Supplementary Schedules

Collectively, this information presents the combined net position restricted for pension benefits for each of the plans administered by the PERB as of June 30, 2019. This financial information also summarizes the combined changes in net position restricted for pension benefits for the year then ended. The information in each of these components is briefly summarized as follows:

(1) Basic Financial Statements

For the fiscal year ended June 30, 2019, basic financial statements are presented for the fiduciary funds administered by MPERA, staff of the PERB. Fiduciary funds are used to pay for pension benefits and expenses. The fiduciary funds are comprised of 11 trust funds that consist of ten pension and one other post-employment benefit (OPEB).

- The Statement of Fiduciary Net Position is a point-in-time snapshot of the assets and liabilities and the resulting restricted fiduciary net position. This financial statement reflects the resources available to pay benefits to retirees and beneficiaries at the end of the fiscal year reported.
- The Statement of Changes in Fiduciary Net Position presents the changes in the restricted fiduciary net position during the fiscal year. Additions are primarily contributions from employers, members, and a nonemployer contributing entity, which includes state appropriations, as well as net investment income. Deductions include pension, disability, survivor and death benefit disbursements, distributions of contributions and interest, and administrative expenses.

(2) Notes to the Basic Financial Statements

The Notes to the Basic Financial Statements are an integral part of the financial statements and provide additional information that is essential for a comprehensive understanding of the data provided in the financial statements. The information in the Notes to the Financial Statements is described as follows:

- **Note A** provides a summary of significant accounting policies including:
 - A1. Basis of Presentation and Basis of Accounting;
 - A2. Capital Assets and Equipment Used in Operations;
 - A3. Operating Lease;

- A4. Net Pension Liability of Employers;
- A5. Other Post-Employment Benefits (OPEB for Healthcare);
- A6. Method used to Value Investments.

- **Note B** provides information about litigation.
- **Note C** describes the membership and descriptions of each of the plans administered by the PERB. Summaries of benefit and contribution information are also provided.

(3) Required Supplementary Information

The required supplementary information (RSI) consists of:

- Schedule of Changes in the Multiple-Employer and Single-Employer Plans Net Pension Liability / (Asset);
- Schedule of Net Pension Liability / (Asset) for Multiple-Employer and Single-Employer Plans;
- Schedule of Employer Contributions for Multiple-Employer and Single-Employer Plans;
- Schedule of Investment Returns.

These schedules are intended to show information for the most recent 10 years. However, for all the schedules only the information for current year and the past five years is presented. Additional yearly data will be displayed as it becomes available.

The RSI also contains related notes concerning actuarial information of the defined benefit pension plans; Other Post-Employment Benefits (OPEB) for the State Healthcare Benefits and related notes to the OPEB plan.

(4) Other Supplementary Schedules

- Schedule of Administrative Expenses;
- Schedule of Investment Expenses; and
- Schedule of Professional / Consultant Fees.

Financial Analysis of the Systems – Defined Benefit Plans

Investments

The State of Montana Board of Investments (BOI), as authorized by state law, invests the defined benefit plans' assets in the *Consolidated Asset Pension Pool (CAPP)* and the *Montana Short Term Investment Pool (STIP)*. Each plan owns an equity position in the pools and receives proportionate investment income from the pools in accordance with respective ownership. Each plan's allocated share of the investment in the pool is shown in the *Statement of Fiduciary Net Position* of the plan. Investment gains and losses are reported in the *Statement of Changes in Fiduciary Net Position*.

Economic Conditions

The Board of Investments' Executive Director and Acting Chief Investment Officer, Dan Villa, had the following remarks on fiscal year 2019 economic conditions:

"Fiscal year 2019 saw net growth in the Consolidated Asset Pension Pool (CAPP) of 5.8% for the tenth consecutive year of positive returns. The since inception return performance for the Public Employee Retirement System (PERS) and Teachers Retirement System (TRS), by far the two largest systems, are 7.66% and 7.67% respectively. The net asset value (NAV) of CAPP grew by \$165.2 million over the fiscal year."

"The asset allocation established by the Board of Investments is meant to facilitate accomplishing the investment objectives of the respective CAPP participants by minimizing losses and maximizing gains in line with the Board's fiduciary obligations. This asset mix ensures diversification to protect against losses but also ensures gains are to the benefit of pensioners. Leading asset classes for FY2019 were Private Equity (9.3%), Investment Grade Credit (8.7%), Real Estate (8.4%), and High Yield (7.2%). TIPS (4.8%), Broad Fixed Income (7.9%), US Treasury and Agency (6.3%), Mortgage-Backed Securities (6.8%), and Diversifying Strategies (3.9%) all posted positive returns for the year. International Equity (.8%), Cash (2.3%), and Natural Resources (3.8%) returns blunted overall gains but did ensure broad market exposure to ensure positive returns over the long-term. Domestic Equity, the largest asset class, had a 6.8% return despite significant market volatility beginning in the first and second quarter of FY2019."

"Moving forward, the Board will have the opportunity to invest in longer duration assets which will carry an additional inherent premium. Investments in Real Estate, Private Equity, and Natural Resources may be a focus. Equities will remain the vast majority of the portfolio into the future, led by U.S. Domestic Equities."

"Returns may be challenged by prolonged international trade disputes, a global economic slowdown, and worldwide political uncertainty. Consumer spending will continue to buoy the U.S. economy and changes in sentiment could pose risks to the economy and, thus, CAPP returns."

"The Board will continue to examine its asset allocation, liquidity of individual pension plans, and economic conditions for opportunities to improve performance." (From Investment Letter written September 13, 2019)

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FINANCIAL SECTION

Fiduciary Net Position - Defined Benefit Plans

As of June 30, 2019 - and comparative totals for June 30, 2018

(dollars in thousands)

	PERS		PERS-DCRP DISABILITY OPEB		JRS		HPORS		SRS	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Assets:										
Cash and Receivables	\$ 188,920	159,525	403	350	3,197	2,344	5,682	4,373	12,100	9,198
Securities Lending Collateral	27,174	36,793			482	653	699	947	1,735	2,284
Investments	5,716,675	5,652,706	4,734	4,111	101,339	100,269	147,047	145,457	364,915	350,935
Property and Equipment ¹	16	25								
Intangible Assets	1,214	1,398			356	410	303	348	357	410
Total Assets	5,933,999	5,850,447	5,137	4,461	105,374	103,676	153,731	151,125	379,107	362,827
Deferred Outflow of Resources	11	3								
Liabilities:										
Securities Lending Liability ²	27,174	36,793			482	653	699	947	1,735	2,284
Other Payables ³	1,193	31,033		5	7	373	255	979	149	1,664
Total Liabilities	28,367	67,826		5	489	1,026	954	1,926	1,884	3,948
Deferred Inflow of Resources	\$ 59	64								
Total Net Position - restricted for pension benefits	\$ 5,905,584	5,782,560	5,137	4,456	104,885	102,650	152,777	149,199	377,223	358,879

¹Due to rounding to thousands instead of hundreds on this Comparative Statement, the Property and Equipment amounts for all systems, but PERS, will not show the 2019 figures. Therefore, the Total Net Position for 2019 will not tie to the Net Position - Restricted for Pension Benefits on the Statement of Fiduciary Net Position on page 36.

Changes In Fiduciary Net Position - Defined Benefit Plans

For the year ended June 30, 2019 - and comparative totals for June 30, 2018

(dollars in thousands)

	PERS		PERS-DCRP DISABILITY OPEB		JRS		HPORS		SRS	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Additions:										
Contributions	\$ 244,106	243,877	465	431	517	1,660	8,080	8,495	19,188	18,835
Investment Income (Loss)	320,938	478,731	314	288	5,687	8,467	8,269	12,283	20,397	29,158
Total Additions	565,044	722,608	779	719	6,204	10,127	16,349	20,778	39,585	47,993
Deductions:										
Benefits	422,445	395,339	97	52	3,846	3,723	12,063	11,546	19,512	18,053
Refunds	12,769	13,345				149	582	322	1,484	1,554
OPEB Expenses	8	50								
Administrative Expenses	4,640	4,948			123	264	127	256	247	432
Miscellaneous Expenses ¹	2,201	2,267								
Total Deductions	442,063	415,949	97	52	3,969	4,136	12,772	12,124	21,243	20,039
Incr/(Decr) in Net Position	\$ 122,981	306,659	682	667	2,235	5,991	3,577	8,654	18,342	27,954
Prior Period	44	528				5	2	6		11

¹Miscellaneous Expenses includes transfers to all other plans.

GWPORS		MPORS		FURS		VFCA		TOTAL		Total Change	Total % of Change
2019	2018	2019	2018	2019	2018	2019	2018	2019	2018		
\$ 6,627	4,695	29,160	26,265	30,317	26,872	1,437	3,238	277,843	236,860	40,983	17.3 %
948	1,231	1,951	2,563	2,047	2,660	182	232	35,218	47,363	(12,145)	(25.6)%
199,466	189,125	410,397	393,802	430,646	408,718	38,342	35,568	7,413,561	7,280,691	132,870	1.8 %
								16	25	(9)	(36.0)%
357	410	319	367	315	363	290	334	3,511	4,040	(529)	(13.1)%
207,398	195,461	441,827	422,997	463,325	438,613	40,251	39,372	7,730,149	7,568,979	161,170	2.1 %
								11	3	8	266.7 %
948	1,231	1,951	2,563	2,047	2,660	182	232	35,218	47,363	(12,145)	(25.6)%
103	709	98	2,121	89	2,018	203	410	2,097	39,312	(37,215)	(94.7)%
1,051	1,940	2,049	4,684	2,136	4,678	385	642	37,315	86,675	(49,360)	(56.9)%
								59	64	(5)	(7.8)%
\$ 206,347	193,521	439,778	418,313	461,189	433,935	39,866	38,730	7,692,786	7,482,243	210,543	2.8 %

GWPORS		MPORS		FURS		VFCA		TOTAL		Total Change	Total % of Change
2019	2018	2019	2018	2019	2018	2019	2018	2019	2018		
\$ 10,252	10,125	28,882	28,644	29,418	28,495	2,370	2,212	343,278	342,774	504	0.1 %
11,125	15,573	22,636	33,238	23,722	34,285	2,071	3,127	415,159	615,150	(199,991)	(32.5)%
21,377	25,698	51,518	61,882	53,140	62,780	4,441	5,339	758,437	957,924	(199,487)	(20.8)%
7,350	6,523	26,221	24,567	25,626	23,863	2,997	2,944	520,157	486,610	33,547	6.9 %
1,000	1,136	3,651	2,728	90	173			19,576	19,407	169	0.9 %
								8	50	(42)	(84.0)%
202	369	190	350	171	329	297	293	5,997	7,241	(1,244)	(17.2)%
						11	11	2,212	2,278	(66)	(2.9)%
8,552	8,028	30,062	27,645	25,887	24,365	3,305	3,248	547,950	515,586	32,364	6.3 %
\$ 12,825	17,670	21,456	34,237	27,253	38,415	1,136	2,091	210,487	442,338	(231,851)	(52.4)%
	9	8	10	1	9		8	55	586	(531)	(90.6)%

Analysis of the Individual Defined Benefit Plans

The schedules of *Fiduciary Net Position* and *Changes in Fiduciary Net Position* for the defined benefit plans, including comparative totals from fiscal year 2018, are shown on the previous pages 24 and 25.

PERS-DBRP and Education

The PERS-DBRP fiduciary net position restricted for pension benefits, the largest PERB defined benefit retirement fund, increased at June 30, 2019 to \$5.9 billion, an increase of \$123.0 million, or 2.1%, from the prior fiscal year.

Additions to the PERS-DBRP net position restricted for pension benefits include contributions from employer, member, and the state; a statutorily-appropriated contribution from the general fund; and investment income. For the fiscal year ended at June 30, 2019:

- Contributions increased from the prior fiscal year by \$229.3 thousand, or 0.09%. Contributions slightly increased due to an increased employer contribution rate.
- The plan's total net investment income decreased from the prior fiscal year by \$157.8 million, or 32.96%. The decrease is a result of a 5.70% market rate of return for the current fiscal year compared to 8.84% for fiscal year 2018. The 5.70% return is lower than the actuarial assumed rate of return of 7.65%.
- The statutorily-appropriated contribution from the State's general fund received for fiscal year 2019 was \$33.6 million. This is recorded as *State Appropriations* on the financial statements.

Deductions from the PERS-DBRP net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$27.1 million, or 6.9%. This is due to the increase in benefit recipients and the increase in the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA).
- Refunds decreased from the prior fiscal year by \$576.8 thousand, or 4.3%. The decrease is due to the number of members taking a refund decreasing.
- The costs of administering the plan's benefits decreased from the prior fiscal year by \$307.8 thousand, or 6.2%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

PERS-DCRP DISABILITY OPEB

The DCRP Disability OPEB net position restricted for pension benefits at June 30, 2019 amounted to \$5.1 million, an increase of \$681 thousand, or 15.3%, from the prior fiscal year.

Additions to the DCRP Disability OPEB net position restricted for pension benefits include employer contributions and investment income. For fiscal year ended at June 30, 2019:

- Employer contributions increased from the prior fiscal year by \$34 thousand or 7.9%. The increase is due to an increase in PERS-DCRP participants.
- The plan's total net investment income increased from the prior fiscal year by \$26 thousand, or 9.1%. The increase is a result of solid growth in U.S. and global markets.

Deductions from the DCRP Disability OPEB net position restricted for pension benefits are disability

retirement benefits. For fiscal year 2019, benefits had an increase of \$44.7 thousand, or 85.3%, from the prior fiscal year. The increase is due to an increase in the number of benefit recipients.

JRS

The JRS net position restricted for pensions at June 30, 2019 amounted to \$104.9 million, an increase of \$2.2 million, or 2.2%, from the prior fiscal year.

Additions to the JRS net position restricted for pension benefits include member and employer contributions, and investment income. For the fiscal year ended at June 30, 2019:

- Contributions decreased from the prior fiscal year by \$1.1 million, or 68.8%. The decrease is due to a moratorium on employer contributions starting January 1, 2018 and ending the last full pay period of June 2019.
- The plan's total net investment income decreased from the prior fiscal year by \$2.8 million, or 32.8%. The decrease is a result of a 5.71% market rate of return for the current fiscal year compared to 8.84% for fiscal year 2018. The 5.71% return is lower than the assumed rate of return of 7.65%.

Deductions from the JRS net position restricted for pension benefits include retirement benefits and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$122.9 thousand, or 3.3%. The increase is due to an increase in the number of retirees and the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients.
- Refunds decreased from the prior fiscal year by \$149.1 thousand, or 100.0%. The decrease is due to refunds being uncommon in the JRS plan.
- Administrative expenses decreased from the prior fiscal year by \$141.9 thousand, or 53.6%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

HPORS

The HPORS net position restricted for pensions at June 30, 2019 amounted to \$152.8 million, an increase of \$3.6 million, or 2.4%, from the prior fiscal year.

Additions to the HPORS net position restricted for pension benefits include employer and member contributions, a statutory appropriation from the general fund, and investment income. For the fiscal year ended at June 30, 2019:

- Contributions decreased from the prior fiscal year by \$414.8 thousand, or 4.9%. The slight decrease is a result of a decrease in active members contributing to the plan and a decrease in the statutory appropriation from the general fund.
- The plan's total net investment income decreased from the prior fiscal year by \$4.0 million, or 32.7%. The decrease is a result of a 5.72% market rate of return for the current fiscal year compared to 8.86% for fiscal year 2018. The 5.72% return is lower than the assumed rate of return of 7.65%.

Deductions from the HPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

FINANCIAL SECTION

- Benefits increased from the prior fiscal year by \$516.9 thousand, or 4.5%. The slight increase is due to an increase in benefit recipients and the increase in the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA) or the minimum monthly benefit for non-GABA recipients.
- Refunds increased from the prior fiscal year by \$260.5 thousand, or 81.0%. The increase was due to an increase in the number of refunds processed.
- Administrative expenses decreased from the prior fiscal year by \$128.9 thousand, or 50.3%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

SRS

The SRS net position restricted for pension benefits at June 30, 2019 amounted to \$377.2 million, an increase of \$18.3 million, or 5.1%, from the prior fiscal year.

Additions to the SRS net position restricted for pension benefits include member and employer contributions, and investment income. For fiscal year ended at June 30, 2019:

- Contributions increased from the prior fiscal year by \$353.1 thousand, or 1.9%. The increase is due to an increase in active members contributing to the plan.
- The plan's total net investment income decreased from the prior fiscal year by \$8.8 million, or 30.0%. The decrease is a result of a 5.71% market rate of return for the current fiscal year compared to 8.83% for fiscal year 2018. The 5.71% return is lower than the assumed rate of return of 7.65%.

Deductions from the SRS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$1.5 million, or 8.1%. The increase is due to an increase in benefit recipients and the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA).
- Refunds decreased from the prior fiscal year by \$70.5 thousand, or 4.5%. The decrease is due to an decrease in the number of members taking a refund.
- Administrative expenses decreased from the prior fiscal year by \$185.6 thousand, or 42.9%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

GWPORS

The GWPORS net position restricted for pension benefits at June 30, 2019, amounted to \$206.3 million, an increase of \$12.8 million, or 6.6%, from the prior fiscal year.

Additions to the GWPORS net position restricted for pension benefits include member and employer contributions, and investment income. For the fiscal year ended at June 30, 2019:

- Contributions increased from the prior fiscal year by \$126.6 thousand, or 1.3%. The increase is due to an increase in active members contributing to the plan.
- The plan's total net investment income decreased from the prior fiscal year by \$4.4 million, or 28.6%. The decrease is a result of a 5.72% market rate of return for the current fiscal year compared to 8.85% for fiscal year 2018. The 5.72% return is lower than the assumed rate of return of 7.65%.

Deductions from the GWPORS net position restricted for pensions include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$826.9 thousand, 12.7%. The increase is due to the increase in benefit recipients and the increase in the average recipient's benefit due to the guaranteed annual benefit adjustment (GABA).
- Refunds decreased from the prior fiscal year by \$135.8 thousand, or 12.0%. The decrease is due to a decrease in refund requests from members.
- Administrative expenses decreased from the prior fiscal year by \$167.1 thousand, or 45.3%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

MPORS

The MPORS net position restricted for pension benefits at June 30, 2019 amounted to \$439.8 million, an increase of \$21.5 million, or 5.1%, from the prior fiscal year.

Additions to the MPORS net position restricted for pension benefits include employer, member, and state contributions, and investment income. For the fiscal year ended June 30, 2019:

- Contributions increased from the prior fiscal year by \$237.2 thousand, or 0.8%. Contributions increased due to an increase in active members contributing to the plan.
- The plan's total net investment income decreased from the prior fiscal year by \$10.6 million, or 31.9%. The decrease is a result of a 5.72% market rate of return for current fiscal year compared to 8.83% for fiscal year 2018. The 5.72% return is lower than the assumed rate of return of 7.65%.

Deductions from the MPORS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$1.7 million, or 6.7%. The increase is due to the increase in benefit recipients and the increase in the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients.
- Refunds increased from the prior fiscal year by \$923.1 thousand, or 33.8%. The increase is due to an increase of refund requests from members.
- Administrative expenses decreased from the prior fiscal year by \$160.3 thousand, or 45.8%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

FURS

The FURS net position restricted for pension benefits at June 30, 2019, amounted to \$461.2 million, an increase of \$27.3 million, or 6.3% from the prior fiscal year.

Additions to the FURS net position restricted for pension benefits include employer, member, and state contributions, and investment income. For the fiscal year ended June 30, 2019:

- Contributions increased from the prior fiscal year by \$922.3 thousand, or 3.2%. Contributions increased due to an increase of active members contributing to the plan.
- The plan's total net investment income decreased from the prior fiscal year by \$10.6 million,

FINANCIAL SECTION

or 30.8%. The decrease is a result of a 5.72% market rate of return for current fiscal year compared to 8.83% for fiscal year 2018. The 5.72% return is lower than the assumed rate of return of 7.65%.

Deductions from the FURS net position restricted for pension benefits include retirement benefits, refunds, and administrative expenses. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$1.8 million, or 7.4%. The increase is due to the increase in benefit recipients and the increase in the average recipient's benefit resulting from the guaranteed annual benefit adjustment (GABA) or the minimum benefit adjustment for non-GABA recipients.
- Refunds decreased from the prior fiscal year by \$83.5 thousand, or 48.2%. The decrease is due to a decrease in refund requests from members and smaller refund amounts.
- Administrative expenses decreased from the prior fiscal year by \$158.4 thousand, or 48.1%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

VFCA

The VFCA net position restricted for pension benefits at June 30, 2019 amounted to \$39.9 million, an increase of \$1.1 million, or 2.9%, from the prior fiscal year.

Additions to the VFCA net position restricted for pension benefits include state contributions and investment income. For the fiscal year ended June 30, 2019:

- Contributions increased from the prior fiscal year by \$158.3 thousand, or 7.2%. The increase is due to increased fire insurance premium taxes distributed to the VFCA from the general fund.
- The plan's total net investment income decreased from the prior year by \$1.1 million, or 33.8%. The decrease is a result of a 5.70% market rate of return for current fiscal year compared to 8.84% for fiscal year 2018. The 5.70% return is lower than the assumed rate of return of 7.65%.

Deductions from the VFCA net position restricted for pension benefits include retirement benefits, administrative expenses, and supplemental insurance payments. For fiscal year 2019:

- Benefits increased from the prior fiscal year by \$52.8 thousand, or 1.8%. The increase is due to the increase in benefit recipients.
- Administrative expenses increased from the prior fiscal year by \$3.7 thousand, or 1.3%. The increase is primarily due to a change in distribution of administrative costs for all plans this fiscal year.
- Supplemental insurance payments decreased from the prior fiscal year by \$300. The decrease is due to a decrease of supplemental insurance claims by VFCA companies.

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Fiduciary Net Position - Defined Contribution Plans**As of June 30, 2019 - and comparative totals for June 30, 2018**

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL		Total Change	Total % of Change
	2019	2018	2019	2018	2019	2018		
Assets:								
Cash and Receivables	\$ 2,671	2,313	740	704	3,411	3,017	394	13.1 %
Securities Lending Collateral								
Investments	260,973	225,634	532,205	501,608	793,178	727,242	65,936	9.1 %
Property and Equipment	2	3	2	2	4	5	(1)	(20.0)%
Intangible Assets	290	334	344	396	634	730	(96)	(13.2)%
Total Assets	263,936	228,284	533,291	502,710	797,227	730,994	66,233	9.1 %
Deferred Outflow of Resources*	1				1		1	
Liabilities:								
Other Payables	723	494	299	403	1,022	897	125	13.9 %
Total Liabilities	723	494	299	403	1,022	897	125	13.9 %
Deferred Inflow of Resources	\$ 6	7	3	3	9	10	(1)	(10.0)%
Total Net Position - restricted for pension benefits	\$ 263,208	227,783	532,989	502,304	796,197	730,087	66,110	9.1 %

* Deferred Outflow of Resources less than \$1,000 will not appear on this statement

Changes in Fiduciary Net Position - Defined Contribution Plans**For the year ended June 30, 2019 - and comparative totals for June 30, 2018**

(dollars in thousands)

	PERS-DCRP		457-PLAN		TOTAL		Total Change	Total % of Change
	2019	2018	2019	2018	2019	2018		
Additions:								
Contributions	\$ 27,403	25,255	24,254	23,543	51,657	48,798	2,859	5.9 %
Investment Income (Loss)	17,962	19,602	36,659	29,293	54,621	48,895	5,726	11.7 %
Total Additions	45,365	44,857	60,913	52,836	106,278	97,693	8,585	8.8 %
Deductions:								
Benefits								
Distributions	9,022	9,746	28,926	29,302	37,948	39,048	(1,100)	(2.8)%
OPEB Expenses	1	5		3	1	8	(7)	(87.5)%
Administrative Expenses	633	749	427	563	1,060	1,312	(252)	(19.2)%
Miscellaneous Expenses	284	267	875	898	1,159	1,165	(6)	(0.5)%
Total Deductions	9,940	10,767	30,228	30,766	40,168	41,533	(1,365)	(3.3)%
Incr/(Decr) in Net Position	\$ 35,425	34,090	30,685	22,070	66,110	56,160	9,950	17.7 %
Prior Period		61		43		104	(104)	

Analysis of the Defined Contribution Plans

The PERB administers two defined contribution plans: *The Public Employees' Retirement System-Defined Contribution Retirement Plan (PERS-DCRP)* and the *Deferred Compensation (457) Plan*. The schedules of *Fiduciary Net Position* and *Changes in Fiduciary Net Position* for the two defined contribution plans, including comparative totals from fiscal year 2018, are presented above.

FINANCIAL SECTION

PERS-DCRP

The PERS-DCRP net position restricted for pension benefits at June 30, 2019, amounted to \$263.2 million, an increase of \$35.4 million, or 15.6%, from the prior fiscal year.

Additions to the PERS-DCRP net position restricted for pension benefits include contributions and investment income. For the fiscal year ended June 30, 2019:

- Contributions increased from the prior fiscal year by \$2.1 million, or 8.5%. Total compensation increased as a result of an increase in active participants and an increase in employer contribution rates.
- The plan's net investment income decreased from the prior fiscal year by \$1.6 million, or 8.4%. The decrease is a result of market returns being lower due to market volatility.

Deductions from the PERS-DCRP net position restricted for pension benefits include member and beneficiary distributions, administrative expenses, and miscellaneous expenses. For fiscal year 2019:

- Distributions decreased from the prior fiscal year by \$724 thousand, or 7.4%. The decrease in distributions was due to less defined contribution members taking IRS permitted rollovers and periodic or lump sum distributions taken at smaller dollar amounts.
- The costs of administering the plan decreased from the prior fiscal year by \$116 thousand, or 15.47%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

Miscellaneous expenses are the PERB's administrative fees assessed by the vendors based on account balances. Miscellaneous expenses increased from the prior fiscal year by \$18 thousand, or 6.6%. The increase is due to the increased number of members investing in the plan.

Deferred Compensation (457(b)) Plan

The Deferred Compensation net position restricted for pension benefits at June 30, 2019 amounted to \$533.0 million, an increase of \$30.7 million, or 6.1%, from the prior fiscal year.

Additions to the Deferred Compensation Plan net position restricted for pension benefits include contributions and investment income. For fiscal year ended June 30, 2019:

- Contributions increased from the prior fiscal year by \$711 thousand, or 3.0%. The increase is due to an increase in participants contributing to the plan.
- The plan's net investment income increased from prior fiscal year by \$7.4 million, or 25.2%. The increase is a result of participants diversely investing their money.

Deductions from the Deferred Compensation Plan net position restricted for pension benefits include member and beneficiary distributions, administrative expenses, and miscellaneous expenses. For fiscal year 2019:

- Distributions decreased from the prior fiscal year by \$376 thousand, or 1.3%. The decrease is due to less deferred compensation participants taking distributions.
- The administrative expenses decreased from the prior fiscal year by \$136 thousand, or 24.2%. The decrease is primarily due to the costs in consulting and professional services pertaining to the computer system project decreasing.

Miscellaneous expenses are the PERB's administrative fees assessed by the vendors based on account balances. Miscellaneous expenses decreased from the prior fiscal year by \$23 thousand, or 2.6%. The decrease is due to a slight decrease in participant account balances.

Actuarial Valuations and Funding Progress

The PERB's consulting actuary conducts two actuarial valuations on an annual basis for each PERB defined benefit retirement plans and the DC Disability OPEB plan: one for GASB-compliant "financial reporting purposes, and the other for "traditional "funding" purposes. Results of each are highlighted in the following paragraphs.

GASB Statements No. 67 and No. 68 Actuarial Valuations

This is the sixth year since the PERB implemented pension accounting and financial reporting standards authorized by the Governmental Accounting Standards Board (GASB). To comply with GASB Statement No. 67, *Financial Reporting for Pensions, an amendment of GASB Statement No. 25*, the PERB relied upon its consulting actuary to compute the total pension liability, net pension liability, pension income or expense, and deferred outflows and deferred inflows of resources for each of its defined benefit retirement funds as of June 30, 2019. The PERB's participating governmental employers are required to report their respective shares of these amounts in their financial statements in compliance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions, an amendment of GASB Statement No. 27*.

For PERB's largest cost-sharing, multiple-employer defined benefit plan, the Public Employees Retirement System (PERS), the June 30, 2019, GASB-compliant actuarial valuation report revealed a net pension liability of \$2.090 billion. This is an increase from the fiscal year 2018 net pension liability of \$2.087 billion. As a result of this June 30, 2019 actuarial valuation, the plan's fiduciary net position as a percentage of the total pension liability was 73.85%, increasing 0.38% from the ratio of 73.47% reported as of June 30, 2018.

Additional information on the GASB-compliant actuarial valuation results for PERB's defined benefit retirement plans may be found in the *Financial Section* of this report in: *Note 4 Net Pension Liability of Employers* beginning on page 43; on page 86; and in the *Required Supplementary Information (RSI)* beginning on page 96.

Funding Actuarial Valuations

A traditional funding actuarial valuation of each of the defined benefit plans and the DCRP Disability OPEB plan is performed annually. The purpose of the traditional funding actuarial valuation is to measure funding progress, and to determine the actuarial determined contribution, contribution sufficiency or deficiency, and other actuarial information necessary for monitoring funding position. The most recent actuarial valuation was performed for fiscal year ending June 30, 2019.

The experience study performed during fiscal year 2017 for the six-year period of July 1, 2010 to June 30, 2016 resulted in changes to the demographic and economic actuarial assumptions and implementation of new actuarial factors. These were used in the June 30, 2019 actuarial valuation.

FINANCIAL SECTION

The PERB's funding objective is to meet long-term benefit obligations through investment income and contributions. Employer and member contributions and other contributions for some systems, and the income from investments provide the cash flow needed to finance future retirement benefits. The Actuarial Determined Contribution (ADC) is a critical component of funding for defined benefit plans. The ADC, as defined by GASB, is a target or recommended contribution to a defined benefit pension plan for the reporting period.

Investment earnings are also critical to the defined benefit plans' funding; investment losses deteriorate the plans' funding. The asset smoothing methods utilized by the plans limits the impacts to four years. The funding status for all defined benefit plans increased in the latest valuation, except for JRS which had a slight decrease.

As required by Article VIII, section 15, of the Montana Constitution and section 19-2-409, MCA, the public retirement plans are to be funded on an actuarially sound basis. Public pension plans are considered actuarially sound if the unfunded actuarial accrued liability amortization period is 30 years or less. According to the PERB's June 30, 2019 actuarial valuations, the unfunded liability of PERS-DBRP, HPORS and GWPORS does not amortize within 30 years.

Overall, funding ratios range from a high of 161.23% (JRS) to a low of 69.23% (MPORS). The *Schedule of Funding Progress*, in the *Actuarial Section* of this report, shows the funding for the last ten fiscal years. The table also shows the amount by which actuarial assets exceeded or fell short of actuarial liabilities. The actuary performs a smoothing of investment gains or losses over a period of four years. At June 30, 2019, the actuarial value of assets of all plans was more than the market value of assets by \$4.1 million due to an average positive 5.58% market return in fiscal year 2019.

The changes in the unfunded actuarial accrued liability is shown in the table below. Additional information about the funding actuarial valuation results for each defined benefit fund can be found in the *Actuarial Section* of this report.

Changes in the Unfunded Actuarial Accrued Liability (UAAL)				
System	June 30, 2018 Valuation UAAL	June 30, 2019 Expected UAAL	Total UAAL (Gain)/Loss	June 30, 2019 Valuation UAAL
PERS-DBRP	\$ 2,024,848,350	\$ 2,054,531,982	\$ (685,133)	\$ 2,053,846,849
PERS-LTD	(101,161)	(175,055)	(66,213)	(241,268)
JRS	(38,451,404)	(40,025,562)	183,038	(39,842,524)
HPORS	82,678,033	84,203,674	(249,533)	83,954,141
SRS	82,810,807	81,738,037	3,572,815	85,310,852
GWPORS	39,228,271	39,806,979	(1,181,073)	38,625,906
MPORS	197,447,549	194,790,720	1,509,633	196,300,383
FURS	119,146,255	110,323,190	5,695,009	116,018,199
VFCA	7,984,367	6,552,213	638,970	7,191,183
Asset gains decrease the UAAL and losses increase the UAAL.				

An analysis of actuarial gains or losses is performed by the PERB's consulting actuary in conjunction with all regularly scheduled valuations. Each gain or loss represents the actuary's estimate of how much the given type of experience caused the Unfunded Actuarial Liability (UAL) or Funding Reserve to change in the period since the previous actuarial valuation. Demographic sources are approximate and the demographic experience is analyzed in greater detail in the actuary's periodic experience studies, with the last one performed during fiscal year 2017. Non-recurring gains and losses result from changes in the actuarial assumptions and benefit improvements. Asset gains decrease the expected UAL and asset losses increase the expected UAL. Refer to the *Summary of Actuarial (Gain)/Loss by Source* schedule in the Actuarial Section for a breakdown of the liabilities.

Additional information about the funding actuarial valuation results for each defined benefit fund may be found in the *Actuarial Section* of this report.

Request for Information

This financial report is intended to provide a general overview of the PERB's financial position as of June 30, 2019, and the results of the financial activities for fiscal year 2019. If you have any questions or comments concerning the contents of this report, please contact Montana Public Employee Retirement Administration:

- By mail at 100 N. Park, Suite 200, PO Box 200131, Helena, Montana 59620-0131,
- By telephone 1-406-444-3154 or toll-free 1-877-275-7372, or
- Via e-mail at mpera@mt.gov.

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Statement of Fiduciary Net Position - Pension (And Other Employee Benefit) Trust Funds as of June 30, 2019

	PERS-DBRP	PERS-DCRP DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Assets						
Cash and Short-term Investments	\$ 184,597,299	396,500	3,185,615	5,549,201	11,701,566	6,577,519
Securities Lending Collateral (Note A6)	27,173,882		481,710	698,981	1,734,601	948,151
Receivables						
Interest	368,510	759	6,139	9,377	23,531	12,908
Accounts Receivable	3,335,401	5,611	4,757	123,381	375,303	35,968
Due from Other Funds	605,258					
Due from Primary Government						
Notes Receivable	12,762					
Total Receivables	4,321,931	6,370	10,896	132,758	398,834	48,876
Investments, at fair value (Note A6)						
Commingled Equity Securities		4,734,434				
CAPP Investment Pool	5,716,675,412		101,339,145	147,047,314	364,914,804	199,466,319
Defined Contributions Fixed Investments						
Defined Contributions Variable Investments						
Deferred Compensation Life Insurance						
Total Investments	5,716,675,412	4,734,434	101,339,145	147,047,314	364,914,804	199,466,319
Capital Assets						
Property and Equipment, at cost,						
net of Accumulated Depreciation (Note A2)	16,403		366	311	366	366
Intangible Assets at cost,						
net of amortization expense	1,214,386		356,441	302,560	356,441	356,441
Total Capital Assets	1,230,789		356,807	302,871	356,807	356,807
Total Assets	5,933,999,313	5,137,304	105,374,173	153,731,125	379,106,612	207,397,672
Deferred Outflow of Resources - OPEB	11,201					
Liabilities						
Securities Lending Liability	27,173,882		481,710	698,981	1,734,601	948,151
Accounts Payable	409,377		203	218,310	15,560	10,649
Unearned Revenue	384,430	8	589	7,768	3,664	6,450
Due to Other Funds			6,034	28,439	129,939	85,457
Compensated Absences	312,398					
OPEB Implicit Rate Subsidy LT	87,315					
Total Liabilities	28,367,402	8	488,536	953,498	1,883,764	1,050,707
Deferred Inflow of Resources - OPEB	58,936					
Net Position - Restricted for Pension Benefits	\$ 5,905,584,176	5,137,296	104,885,637	152,777,627	377,222,848	206,346,965

The notes to the financial statements are an integral part of this statement.

Defined Benefit Pension Plans				Defined Contribution Plans			Total Pension Trust Funds
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	
12,849,805	13,534,755	1,429,197	239,821,457	2,428,593	275,572	2,704,165	242,525,622
1,950,796	2,047,052	182,258	35,217,431				35,217,431
25,719	26,999	2,463	476,405	3,122	543	3,665	480,070
303,063	148,829	4,480	4,336,793	239,320	464,277	703,597	5,040,390
			605,258				605,258
15,981,505	16,605,850		32,587,355				32,587,355
			12,762				12,762
16,310,287	16,781,678	6,943	38,018,573	242,442	464,820	707,262	38,725,835
			4,734,434				4,734,434
410,396,571	430,646,377	38,342,398	7,408,828,340				7,408,828,340
				16,945,434	234,139,873	251,085,307	251,085,307
				244,027,337	298,052,806	542,080,143	542,080,143
					12,316	12,316	12,316
410,396,571	430,646,377	38,342,398	7,413,562,774	260,972,771	532,204,995	793,177,766	8,206,740,540
328	324	298	18,762	2,049	1,738	3,787	22,549
319,139	314,994	290,126	3,510,528	290,126	344,007	634,133	4,144,661
319,467	315,318	290,424	3,529,290	292,175	345,745	637,920	4,167,210
441,826,926	463,325,180	40,251,220	7,730,149,525	263,935,981	533,291,132	797,227,113	8,527,376,638
			11,201	1,090	455	1,545	12,746
1,950,796	2,047,052	182,258	35,217,431				35,217,431
3,249	1,391		658,739	666,733	269,792	936,525	1,595,264
9,355	19,772	953	432,989	428	200	628	433,617
85,596	67,822	201,971	605,258				605,258
			312,398	46,939	24,921	71,860	384,258
			87,315	8,842	4,245	13,087	100,402
2,048,996	2,136,037	385,182	37,314,130	722,942	299,158	1,022,100	38,336,230
			58,936	6,036	3,003	9,039	67,975
439,777,930	461,189,143	39,866,038	7,692,787,660	263,208,093	532,989,426	796,197,519	8,488,985,179

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Statement of Changes in Fiduciary Net Position - Pension (And Other Employee Benefit) Trust Funds

for the year ended June 30, 2019

	PERS-DBRP	PERS-DCRP DISABILITY OPEB	JRS	HPORS	SRS	GWPORS
Additions						
Contributions (Note C)						
Employer	\$ 107,852,604	464,674		5,845,988	10,565,093	4,688,129
Plan Member	101,600,460		516,777	2,001,852	8,613,753	5,563,650
Interest Reserve Buyback	112,775			467	2,182	1,977
Retirement Incentive Program	1,221					
Miscellaneous Revenue	(103,209)	7	(281)	(1,079)	7,466	(1,869)
State Contributions	1,026,994			233,139		
State Appropriations	33,615,000					
Nonvested Member Forfeitures						
Total Contributions	244,105,845	464,681	516,496	8,080,367	19,188,494	10,251,887
Investments (Note A6, Note A8)						
Net Appreciation (Depreciation)						
in Fair Value of Investments	352,531,837	313,844	6,251,974	9,083,681	22,383,941	12,206,934
Interest	3,684,822	7,801	60,196	93,218	234,068	124,408
Dividends						
Investment Expense	(36,002,624)	(7,435)	(637,775)	(926,708)	(2,267,168)	(1,231,417)
Net Investment Income	320,214,035	314,210	5,674,395	8,250,191	20,350,841	11,099,925
Securities Lending Income						
Securities Lending Income	1,453,616		25,761	37,416	91,523	49,718
Securities Lending Rebate and Fees	(729,473)		(12,928)	(18,777)	(45,929)	(24,950)
Net Securities Lending Income	724,143		12,833	18,639	45,594	24,768
Total Net Investment Income	320,938,178	314,210	5,687,228	8,268,830	20,396,435	11,124,693
Total Additions	565,044,023	778,891	6,203,724	16,349,197	39,584,929	21,376,580
Deductions (Note C)						
Benefits	422,444,896	97,076	3,846,157	12,062,607	19,512,312	7,349,795
Refunds/Distributions	12,360,997			582,438	1,438,814	1,000,919
Refunds to Other Plans	407,696				44,792	(611)
Transfers to MUS-RP	232,194					
Transfers to DCRP	1,968,902					
Supplemental Insurance Payments						
OPEB Expenses	7,819					
Administrative Expenses	4,640,042		122,618	127,400	246,523	202,040
Miscellaneous Expenses						
Total Deductions	442,062,546	97,076	3,968,775	12,772,445	21,242,441	8,552,143
Net Increase (Decrease)	122,981,477	681,815	2,234,949	3,576,752	18,342,488	12,824,437
Net Position Restricted for Pension Benefits						
Beginning of Year	5,782,558,598	4,455,481	102,650,688	149,198,868	358,880,360	193,522,528
Prior Period Adjustments (Note A7)	44,101			2,007		
End of Year	\$ 5,905,584,176	5,137,296	104,885,637	152,777,627	377,222,848	206,346,965

The notes to the financial statements are an integral part of this statement.

Defined Benefit Pension Plans				Defined Contribution Plans			Total Pension Trust Funds 2018
MPORS	FURS	VFCA	Total Defined Benefit Pension Plans	PERS-DCRP	457 Plan	Total Defined Contribution Plans	
7,852,879	7,341,600		144,610,967	12,973,539	120,307	13,093,846	157,704,813
5,029,442	5,530,496		128,856,430	13,505,558	23,566,708	37,072,266	165,928,696
8,357	(3,133)		122,625				122,625
			1,221				1,221
355	(18,068)	5	(116,673)	122,681	567,292	689,973	573,300
15,990,599	16,566,861	2,370,449	36,188,042	87,294		87,294	36,275,336
			33,615,000				33,615,000
				714,024		714,024	714,024
28,881,632	29,417,756	2,370,454	343,277,612	27,403,096	24,254,307	51,657,403	394,935,015
24,901,073	26,083,791	2,276,595	456,033,670	6,705,553	16,045,730	22,751,283	478,784,953
260,185	273,601	23,528	4,761,827	11,324,711	21,565,366	32,890,077	37,651,904
(2,577,368)	(2,689,133)	(234,330)	(46,573,958)	(68,148)	(952,123)	(1,020,271)	(47,594,229)
22,583,890	23,668,259	2,065,793	414,221,539	17,962,116	36,658,973	54,621,089	468,842,628
104,061	108,567	9,464	1,880,126				1,880,126
(52,221)	(54,483)	(4,749)	(943,510)				(943,510)
51,840	54,084	4,715	936,616				936,616
22,635,730	23,722,343	2,070,508	415,158,155	17,962,116	36,658,973	54,621,089	469,779,244
51,517,362	53,140,099	4,440,962	758,435,767	45,365,212	60,913,280	106,278,492	864,714,259
26,220,684	25,626,191	2,996,808	520,156,526				520,156,526
3,636,764	89,824		19,109,756	9,022,446	28,926,195	37,948,641	57,058,397
14,437			466,314				466,314
			232,194				232,194
			1,968,902				1,968,902
		10,875	10,875				10,875
			7,819	773	343	1,116	8,935
189,981	170,851	296,866	5,996,321	633,299	426,710	1,060,009	7,056,330
				284,100	874,665	1,158,765	1,158,765
30,061,866	25,886,866	3,304,549	547,948,707	9,940,618	30,227,913	40,168,531	588,117,238
21,455,496	27,253,233	1,136,413	210,487,060	35,424,594	30,685,367	66,109,961	276,597,021
418,314,296	433,934,505	38,729,625	7,482,244,949	227,783,499	502,304,059	730,087,558	8,212,332,507
8,138	1,405		55,651				55,651
439,777,930	461,189,143	39,866,038	7,692,787,660	263,208,093	532,989,426	796,197,519	8,488,985,179

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Financial Statements

for the Fiscal Year Ended June 30, 2019

The Public Employees' Retirement Board (PERB) is an independent, seven-member board, appointed by the Governor. The members are assigned five-year, staggered terms. The PERB consists of:

- two members at large,
- two active defined benefit public employees,
- one active defined contribution public employee,
- one member experienced in investments, and
- one retired public employee.

The PERB approves the annual operating budget, developed by the Montana Public Employee Retirement Administration (MPERA) management, before the beginning of the fiscal year. As governed by statute, the PERB's defined benefit administrative expenses may not exceed 1.5 percent of total defined benefit plan retirement benefits paid. In addition, the PERB decides its legislative priorities, hires the executive director, establishes the policies and procedures that govern operations at MPERA, and hears and rules on appeal matters of disabilities, retirees, and members. Board members do not receive compensation for their service to MPERA, but are reimbursed for necessary expenses incurred while serving.

The PERB oversees ten retirement plans, an OPEB, and the related member education funds. The Public Employees' Retirement System Defined Contribution Disability Other Post-Employment Benefit (PERS-DCRP Disability OPEB) is a trust fund providing a defined benefit for disabled members of the PERS-DCRP. The retirement plans are eight defined benefit plans and two defined contribution plans. The defined benefit retirement plans are:

- Public Employees' Retirement System (PERS-DBRP),
- Judges' Retirement System (JRS),
- Highway Patrol Officers' Retirement System (HPORS),
- Sheriffs' Retirement System (SRS),
- Game Wardens' and Peace Officers' Retirement System (GWPORS),
- Municipal Police Officers' Retirement System (MPORS),
- Firefighters' Unified Retirement System (FURS), and
- Volunteer Firefighters' Compensation Act (VFCA).

The defined contribution retirement plans are:

- Public Employees' Retirement System (PERS- DCRP), and
- Deferred Compensation (457(b)) Plan, governed by IRC § 457.

The PERS-DCRP was implemented July 1, 2002. All new PERS members have a 12-month window to file an irrevocable plan choice election. PERS members are provided education regarding their decision to participate in the Defined Benefit Retirement Plan (PERS-DBRP) or the Defined Contribution Retirement Plan (PERS-DCRP). If members are employees of the university system

they have a third choice, the Montana University System Retirement Program (MUS-RP). Further education is provided for the members who choose the PERS-DCRP, including information on investment choices.

The PERB began oversight of the Deferred Compensation (457(b)) Plan on July 1, 1999. The Deferred Compensation Plan is available to all employees of the State, the Montana University System and contracting political subdivisions.

The MPERA, as a state agency, participates as an employer in the PERS-DBRP, PERS-DCRP and the Deferred Compensation Plan.

The assets of each plan are maintained separately, including member education funds. The assets may be used only for the payment of benefits to the members and administrative expenses of the appropriate plan, in accordance with the terms of each plan as prescribed in Title 19 of the Montana Code Annotated (MCA). The financial statements are presented by combining the PERS-DBRP and the DBRP Education Fund and by combining the PERS-DCRP and the DCRP Education Fund. A presentation of the individual funds is shown at the end of the financial section on pages 130 to 133.

NOTE A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A1. BASIS OF PRESENTATION AND BASIS OF ACCOUNTING

Basis of Presentation

The PERB is a fiduciary component unit Pension Trust Fund of the State of Montana financial reporting entity. The accompanying financial statements were prepared by MPERA, staff of the PERB, in accordance with generally accepted accounting principles (GAAP). In doing so, MPERA adheres to accounting and financial reporting standards established by the Governmental Accounting Standards Board (GASB). GASB is the independent, not-for-profit, standards-setting organization and the official source of GAAP for state and local governmental entities in the United States of America.

PERB's accounts are organized and presented on the basis of funds. All of the funds presented in the financial statements are fiduciary funds. These funds are classified as pension trust funds, and are maintained for the exclusive benefit of the members and their beneficiaries.

Basis of Accounting

The basis of accounting indicates the timing of transactions or events for recognition in the financial statements. The PERB's financial statements are reported using fund accounting principles and the accrual basis of accounting. Plan member contributions, employer contributions, and related receivables are recognized as revenues in the accounting period in which they are earned and become measurable, pursuant to formal commitments and statutory requirements. Benefit payments and refunds/distributions are recognized in the accounting period in which they are due and payable in accordance with the terms of each plan. Administrative and other expenses, and the associated liabilities, are recognized in the period the liability is incurred. Administrative expenses are financed through investment earnings on the pension trust fund for the defined benefit plans. Interfund receivables and payables exist at year-end for defined benefit administrative expenses that are

FINANCIAL SECTION

accounted for within PERS-DBRP and allocated to the other defined benefit funds at year-end. Costs specifically related to the computer system upgrades are charged directly to the individual plans.

On a quarterly basis, participants of the PERS-DCRP are charged a basis point fee based on their individual account balances. On a quarterly basis, the participants of the Deferred Compensation Plan are charged a basis point fee on a sliding scale based on their individual account balances. The record keeper, EmpowerTM Retirement, withholds the basis point fees from participant accounts. The PERB incurs administrative expenses for the cost of EmpowerTM services and agency expenses. Fees collected from participant accounts are used to offset the costs of Empower'sTM fees. Any remaining fees are remitted to the PERB to cover each plan's administrative expenses. The excess basis point fees remitted to the PERB are recorded as *Miscellaneous Revenue* on the financial statements.

Prior Period Adjustments

Prior period adjustments relate to corrections of errors and changes in accounting policy from prior periods. The prior period adjustments for fiscal year 2019 were adjustments of prior year benefit payables that were over 5 years old.

Significant Accounting Changes

Significant accounting policies are specific accounting principles and methods used and considered to be the most appropriate to use in current circumstances in order to fairly present the financial statements. During fiscal year 2019, there was a change in the distribution of the administrative expenses among the small systems at the end of the fiscal year. In the past, the distribution was based on plan membership of retirees and active members. This fiscal year, the distribution is based on membership count of retirees and active members plus a program allocation by personal services. This resulted in an increase of 1.0% from last fiscal year's allocation in VFCA.

A2. CAPITAL ASSETS AND EQUIPMENT USED IN OPERATIONS

Assets under \$5,000 are expensed in the year purchased. Assets (equipment) valued at \$5,000 or more are recorded at cost less straight-line depreciation over the estimated useful life of five to ten years. Assets (other intangibles) valued at \$100,000 or more are recorded at cost less straight-line depreciation over the estimated useful life of five to ten years. Equipment consists of a ScanPro 3000 fiche film reader. Property consists of a remodel to the office space.

The \$4,144,661 *Intangible Assets at Cost* on the Statement of Fiduciary Net Position consists of the PERIS computer system. This is an intangible asset and the intangible asset is amortized over 10 years.

A3. OPERATING LEASE

Operating leases are rental agreements where the payments are chargeable as rent and recorded as administrative expenses. MPERA renegotiated a 7-year lease for office space in November 2013, at the location of 100 North Park Avenue, Helena, MT. The lease is payable monthly and includes inflationary adjustments over the period of the lease.

A4. NET PENSION LIABILITY OF EMPLOYERS

The net pension liability (the retirement systems' total pension liability determined in accordance with GASB Statement No. 67 less the fiduciary net position at fair value) as of June 30, 2019, is shown below in the *Schedule of Employers' Net Pension Liability (NPL)*.

Actuarial valuations of the ongoing systems involve estimates of the reported amounts and assumptions about probability of occurrence of events far into the future. The information used includes, but is not limited to, the plan provisions, employee data, and financial information provided by the PERB. Amounts determined regarding the NPL are subject to revision with each valuation as actual results are compared with past expectations and new estimates are made about the future. The last experience study was performed in 2017 using June 30, 2016 valuation data.

The reporting date for the retirement systems is June 30, 2019. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2019 and the Total Pension Liability (TPL) is based on the results of an actuarial valuation date of June 30, 2018, and rolled forward to June 30, 2019 using generally accepted actuarial procedures.

The *Schedule of Employers' Net Pension Liability*, presented as Required Supplementary Information (RSI) following the Notes to the statements, displays multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the TPL.

Employers' Net Pension Liability / (Asset) as of June 30, 2019

(dollar amounts are in thousands)

System	Total Pension Liability (a)	Plan Fiduciary Net Position ¹ (b)	Employers' Net Pension Liability / (Asset) (a-b)	Plan Fiduciary Net Position as a % of the Total Pension Liability (b-a)	Covered Payroll (c)	Net Pension Liability / (Asset) as a % of Covered Employee Payroll ((a-b)/c)
PERS-DBRP	\$ 7,993,617	\$ 5,903,306	\$ 2,090,311	73.85%	\$ 1,247,344	167.58 %
JRS	65,319	104,886	(39,567)	160.58%	7,382	(535.96)%
HPORS	237,727	152,778	84,950	64.27%	15,178	559.71 %
SRS	460,621	377,223	83,398	81.89%	80,461	103.65 %
GWPORS	247,012	206,347	40,665	83.54%	51,677	78.69 %
MPORS	638,822	439,778	199,044	68.84%	54,282	366.68 %
FURS	575,903	461,189	114,714	80.08%	50,756	226.01 %
VFCA	46,773	39,866	6,907	85.23%	N/A ²	N/A ²

¹The PERS-DB Education Fund balance is not included in the GASB 67 reporting for fiscal year ending June 30, 2019.

²Covered payroll is not applicable to VFCA because members are unpaid volunteers.

FINANCIAL SECTION

A summary of the actuarial assumptions for the retirement plan's GASB No. 67 reporting as of the latest actuarial valuation on June 30, 2019 is shown in the table below and is shown in the Notes to the RSI on pages 124 and 125.

Summary of Key Actuarial Methods and Assumptions								
	PERS	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA¹
Valuation date	6/30/2019	6/30/2019	6/30/2019	6/30/2019	6/30/2019	6/30/2019	6/30/2019	6/30/2019
Actuarial Cost Method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Amortization method	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level dollar, open
Amortization period for Actuarial Contribution	30	30	30	30	30	30	30	20
Asset valuation method	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market	4-year smoothed, market
Actuarial assumptions:								
Investment rate of return compounded annually (net of investment expenses)	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%	7.65%
Projected salary increases:								
General Wage Growth*	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	N/A
Merit	0% - 4.8%	None	0% - 6.3%	0% - 6.3%	0% - 6.3%	0% - 6.6%	0% - 6.3%	N/A
*Includes inflation at	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%	2.75%
Administrative Expenses as a Percentage of Payroll	0.26%	0.17%	0.27%	0.23%	0.23%	0.23%	0.25%	\$70,586
Mortality (healthy): RP-2000 Combined Mortality projected to 2020 using Scale BB and Mortality (disabled): RP-2000 Combined Mortality with no projections.								
Benefit Adjustments								
GABA	3% for pre-July 1, 2007 hires, 1.5% for post July 2007 and pre-June 30, 2013; and 1.5% to 0% for new hires on or after July 1, 2013; all after 1 year	3% after 1 year	3% for pre-July 1, 1997 hires after 1 yr or 1.5% after 3 years if hired on or after July 1, 2013	3% for pre-July 1, 2007 hires or 1.5% for new hires on or after July 1, 2007, after 1 year	3% for pre-July 1, 2007 hires or 1.5% for new hires on or after July 1, 2007, after 1 year	3% after 1 year	3% after 1 year	N/A
Non-GABA	N/A	Biennial increase to salary of active member in like position	2% per yr service, not to exceed 60% of probationary officer's base pay; and increase not to exceed 5% of previous benefit.	N/A	N/A	Benefit may not be less than one-half of the compensation paid to a newly confirmed police officer	Benefit may not be less than one-half of the compensation paid to a newly confirmed firefighter	N/A
¹ Covered payroll for VFCA is not applicable, members are unpaid volunteers and do not contribute to the fund.								
Actuarial Assumptions are based on 2017 Experience Study								

Long-Term Expected Rate of Return on Investments

The long-term expected rate of return on pension plan investments is reviewed regularly as part of experience studies prepared for the System. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best estimate ranges of expected future real rates of return are considered. Estimates of variability and correlations for each asset class, were developed by the Plan's investment consultant. The ranges of these estimates were combined to develop the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by the investment consultant are often intended for use over a 10-year investment horizon and are not always useful in setting the long-term rate of return investment horizon or the long-term rate of return for funding pension plans, which covers a longer time frame. The long-term rate of return assumption is intended to be a long-term assumption (30 to 50 years) and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years. The average long-term capital market assumptions published in the *Survey of Capital Market Assumptions 2016 Edition* by Horizon Actuarial Service, LLC, yield a median real return of 5.10%. Combining the median real return with the 2.75% assumed inflation assumption results in a nominal return of 7.85%. As a result, Cavanaugh Macdonald, PERB's actuary, recommend using the long-term assumed rate of return assumption adopted by the Board of 7.65%.

Best estimates of arithmetic real rates of return for each major asset class included in the Plans target asset allocation as of June 30, 2019, are summarized in the following Target Allocations table.

Target Allocations as of June 30, 2019		
Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return Arithmetic Basis
Cash equivalents	3.0%	4.09%
Domestic equity	36.0%	6.05%
Foreign equity	18.0%	7.01%
Fixed income	23.0%	2.17%
Private equity	12.0%	10.53%
Real estate	8.0%	5.65%
Totals	100.0%	

Single Discount Rate

The discount rate used to measure the TPL for all Plans was 7.65% which is the assumed long-term expected rate of return on investments. The projection of cash flows used to determine the discount rate assumed that member, employer, and state contributions will be made at the contribution rates specified in the applicable Montana statutes, which can only be changed by the Legislature. Based on those assumptions, the fiduciary net position of all the Plans was projected to be available to make all the projected future benefit payments of the current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL.

Sensitivity Analysis

In accordance with GASB No. 67 regarding the disclosure of the sensitivity of the NPL to changes in the discount rate, the NPL of the participating employers is presented as using the discount rate of 7.65%, as well as what the employers' NPL would be if it were calculated using a discount rate that is 1.00% lower (6.65%) or 1.00% higher (8.65%) than the current rate. The table that follows presents the sensitivity disclosures for each plan.

Sensitivity of NPL / (Asset) based on Changes in Discount Rate as of June 30, 2019 (dollar amounts are in thousands)			
System	1% Decrease 6.65%	Current Discount Rate 7.65%	1% Increase 8.65%
PERS-DBRP	\$ 3,003,181	\$ 2,090,311	\$ 1,323,159
JRS	(33,242)	(39,567)	(45,028)
HPORS	117,532	84,950	58,614
SRS	147,965	83,398	30,472
GWPORS	77,614	40,665	10,489
MPORS	292,628	199,044	124,131
FURS	200,350	114,714	45,664
VFCA	11,433	6,907	3,069

As can be seen from the table, changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate.

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on plan investments shows investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. A schedule of the annual money-weighted rate of return for all Plans is presented below and in the RSI on pages 120 and 121.

Annual Money-Weighted Rate of Return as of June 30, 2019			
PERS-DBRP	5.64%	GWPORS	5.73%
JRS	5.65%	MPORS	5.56%
HPORS	5.64%	FURS	5.59%
SRS	5.70%	VFCA	5.59%

A5. OTHER POST-EMPLOYMENT BENEFITS (OPEB FOR HEALTHCARE)

Plan Description

In accordance with GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions, MPERA is required to recognize and report certain amounts associated with their employees and dependents that are eligible to receive health care through the State Group Benefits Plan administered by the Montana Department of Administration. Statement 75 includes requirements to record and report each employers' proportionate share of the collective Total OPEB Liability, OPEB Expense, and Deferred Outflows and Deferred Inflows of Resources associated to OPEB.

The State of Montana offers an OPEB plan that is not administered through a trust; as such, there are no plan assets accumulated to offset the total OPEB liability. The State of Montana pays for postemployment healthcare benefits on a pay-as-you-go basis. Section 2-18-8, MCA gives the Department of Administration authority to establish and amend the funding policy for the State group health insurance plan.

Benefits Provided

In accordance with Section 2-18-704, MCA, the State provides optional post-employment medical, vision, and dental health care benefits to the following employees and dependents electing to continue coverage and pay administratively established contributions: (1) employees and dependents who retire under applicable retirement provisions and (2) surviving dependents of deceased employees. Plan coverage is on a calendar year basis. For GASB Statement No. 75 reporting, the State Group Benefits Plan is considered a single-employer plan and MPERA is considered to be a participating employer in the plan.

In addition to the employee benefits, the following post-employment benefits are provided. The Montana Department of Administration established retiree medical premiums varying between \$448 and \$1,777 per month for calendar year 2019 depending on the medical plan selected, family coverage, and Medicare eligibility. Retirees pay 100% of the premiums for medical, dental, and vision. Depending on the coverage selected, administratively-established monthly dental and vision premiums vary between \$41.10 and \$70.00 and \$7.64 and \$22.26, respectively. Basic life insurance in the amount of \$14,000 is provided until age 65 or Medicare eligible at a cost of \$1.90 per month. The State Benefit Plans reimburse all validated medical claims net of member obligations (annual deductibles and coinsurance of the members' selected medical plan). Dental claims are reimbursed at 50% to 100% of the allowable charges, depending on the services provided. The State acts as secondary payer for retired Medicare-eligible claimants.

Benefits Not Included in the Actuarial Valuation

Dental and vision benefits are rated separately for retirees based on actual retiree cost, so there is no implicit subsidy; therefore, no liability for these benefits is calculated in the actuarial valuation. The basic life insurance benefit is not available as an employer-provided group insurance benefit for retirees; therefore, no liability for life insurance is calculated in this valuation.

FINANCIAL SECTION

Employees covered by benefit terms

At December 31, 2017, MPERA had 46 active employees and one retired employee/spouse/surviving spouse covered by the benefit terms for a total of 47 covered employees.

The estimates were prepared based on an actuarial valuation as of the year ending December 31, 2017, rolled forward to the measurement date of March 31, 2019, for the Department of Administration. The resulting State of Montana Actuarial Valuation of Other Post-Employment Benefits (OPEB) contains the MPERA data and is available through the following address.

Montana Department of Administration
State Accounting Division
Room 255, Mitchell Bldg
125 N Roberts Street
PO Box 200102
Helena, MT 59620-0102

Schedule of Changes in Total OPEB Liability

At June 30, 2019, MPERA reported a liability of \$100,402 for its 0.18026% proportionate share of the total OPEB Liability. At June 30, 2018, MPERA reported a liability of \$84,795 for its 0.16805% proportionate share of the total OPEB Liability. MPERA's proportion of the total OPEB liability measurement is based upon MPERA's actuarially determined OPEB liability in comparison to the collective OPEB liability for the State's healthcare plan. MPERA's change in proportion is 0.01221%.

The following table presents the Other Items Related to and Changes in the Total OPEB Liability.

Schedule of Changes in Total OPEB Liability	
Balances at 6/30/2018	\$ 84,795
Changes for the year:	
Service Cost	6,271
Interest	6,096
Difference between Expected and Actual Experience	
Changes of assumptions or other inputs	8,460
Benefit Payments (Contributions)	(5,220)
Net Changes	15,607
Balances as of 6/30/2019	\$ 100,402

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Actuarial assumptions and other inputs

The total OPEB liability in the December 31, 2017 actuarial valuation, rolled forward to March 31, 2019, was determined using the following actuarial assumptions and other inputs, applied to all periods included in the measurement, unless otherwise specified.

Contributions:	\$ (5,220)
Actuarial valuation date	December 31, 2017
Actuarial measurement date ⁽¹⁾	March 31, 2019
Actuarial cost method	Entry age normal funding method
Amortization method	Open basis
Asset valuation method	Not applicable since no assets meet the definition of plan assets under GASB 75
Actuarial Assumptions:	
Discount rate	3.79%
Projected payroll increases	4.00%
Participation:	
Future retirees	55.00%
Future eligible spouses	60.00%
Marital status at retirement	70.00%
⁽¹⁾ Update procedures were used to roll forward the total OPEB liability to the measurement date.	

Mortality - Healthy: For MPERA, Healthy mortality is assumed to follow the RP2000 Combined Mortality Table with improvements projected by Scale BB to 2020, set back one year for males.

Mortality - Disabled: For MPERA, disabled mortality is assumed to follow the RP2000 Combined Mortality Table with no projections.

Changes in actuarial assumptions and methods since last measurement date

- There were no changes in actuarial methods since the last measurement date.
- Changes in actuarial assumptions since the last measurement date is the interest rate based upon the March 31, 2019, 20-year municipal bond index per GASB 75 requirements.

Changes in benefit terms since last measurement date

- There were no changes in benefit terms since the last measurement date.

FINANCIAL SECTION

Sensitivity Analysis

Sensitivity of the total OPEB liability to changes in the discount rate:

The following presents the total OPEB liability of MPERA, as well as MPERA's total OPEB liability calculated using a discount rate that is 1.00% lower (2.79%) or 1.00% higher (4.79%) than the current discount rate:

Discount Rate 3/31/19	1% Decrease (2.79%)	Discount Rate (3.79%)	1% Increase (4.79%)
Total OPEB Liability	\$ 136,473	\$ 100,402	\$ 73,662

Sensitivity of the total OPEB liability to changes in the healthcare cost trend rates:

The following presents the total OPEB liability of MPERA, as well as MPERA's total OPEB liability calculated using healthcare cost trend rates that are 1.00% lower (6.0%) or 1.00% higher (8.0%) than the current healthcare cost trend rates:

Healthcare Rate 3/31/19	1% Decrease (6.0%)	Current Rate (7.0%)	1% Increase (8.0%)
Total OPEB Liability	\$ 71,519	\$ 100,402	\$ 141,051

OPEB Expense

For the year ended June 30, 2019, MPERA recognized OPEB expense of \$8,935.

Deferred Outflows and Deferred Inflows of Resources Related to OPEB

At June 30, 2019, MPERA recorded deferred outflows and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflow of Resources
Differences between expected and actual experience		\$ 67,975
Changes of assumptions or other inputs	8,460	
*Benefit Payments associated with transactions subsequent to the measurement date of the total OPEB liability	4,287	
Total	12,747	\$ 67,975
*Amounts reported as deferred outflows of resources related to OPEB resulting from MPERA's benefit payments in FY2019 (April 1, 2019 through June 30, 2019) subsequent to the measurement date.		

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Amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in future years as an increase or (decrease) to OPEB expense as follows:

Year ended June 30, 2019	Amount recognized as an Increase or (Decrease) to OPEB Expense
2020	\$ (5,373)
2021	\$ (5,373)
2022	\$ (5,373)
2023	\$ (5,373)
2024	\$ (5,373)
Thereafter	\$ (32,650)

A6. METHOD USED TO VALUE INVESTMENTS

According to Article VIII, section 13 of the Montana Constitution and section 19-2-504, MCA, the Board of Investments (BOI) has a fiduciary responsibility for investing the defined benefit plan assets on behalf of the defined benefit plan members. Investments are determined in accordance with the statutorily and constitutionally mandated “prudent expert principle.” Pursuant to Article VIII, section 15 of the Montana Constitution and sections 19-2-502 and 19-2-503, MCA, the PERB has a fiduciary responsibility for the administration of the pension trust funds. For the defined benefit pools, the PERB relies on the Investment Policy Statements that are drafted and approved by the BOI. In this process, the BOI utilizes information obtained from RV Kuhns & Associates, Inc., the investment consultant. Investments administered by the BOI for the PERB are subject to their investment risk policies. The PERB does not have an investment policy of its own to address risks. Information on investment policies, investment activity, investment management fees, investment risks, and a listing of specific investments owned by the pooled asset accounts can be obtained by contacting BOI, the investment manager, at the following address:

Montana Department of Commerce
Board of Investments
2401 Colonial Drive, 3rd Floor
Helena, MT 59620-0126

Defined benefit investments are reported at fair value as of June 30, 2019.

BOI has separately issued financial statements that can be accessed by contacting BOI at the above address.

The PERS-DCRP and deferred compensation plan’s Montana Fixed Fund is a stable value investment option administered and monitored by the PERB with input from the Employee Investment Advisory Committee and the investment consultant. The PERB has established an investment policy for the Montana Fixed Fund to identify objectives, investment guidelines, and outline the responsibility of the outside vendors; Pacific Investment Management Company, LLC (PIMCO) the stable value manager, State Street Bank and Trust Company (State Street) the custodial bank, and third party synthetic Guaranteed Interest Contract (GIC) providers, Transamerica Premier Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential), and Voya

FINANCIAL SECTION

Retirement Insurance and Annuity Company (Voya). All money invested in the Montana Fixed Fund investment option of the PERS-DCRP and deferred compensation plan money is in a Pooled Trust.

For both the PERS-DCRP and deferred compensation plan, the third party recordkeeper, Empower™ Retirement, tracks and reports the daily trading and valuations of all investment options including the assets held by the individual mutual fund companies.

In addition to the laws cited previously, the PERS-DCRP investments are also governed by section 19-3-2122, MCA and the deferred compensation plan investments are governed by section 19-50-102, MCA.

The PERB has separate investment policy statements for the PERS-DCRP and deferred compensation plans. The investment policies are reviewed and revised, if necessary, by the PERB annually. The investment options are reviewed quarterly for compliance with the established investment policy statement. DCRP and deferred compensation plan investments are reported at fair value as of June 30, 2019.

The following are the summaries of: a) BOI's fiscal year-end statements; b) the Stable Value Group Trust contracts; and c) a statement about the variable investments.

BOI Pooled Investments

As of June 30, 2019, BOI managed two major diversified pools for the retirement funds, Montana Short Term Investment Pool (STIP) and Montana Consolidated Asset Pension Pool (CAPP). The PERS-DCRP Disability OPEB trust fund consists of a portfolio of commingled equity index funds that are recorded under *Commingled Equity Securities* in the financial statements.

Short-Term Investment Pool (STIP)

The Montana Public Retirement Plans investment in the Short-Term Investment Pool (STIP) will provide the Plans with exposure to Cash related investments. STIP will be managed internally by BOI utilizing an active investment strategy. STIP invests primarily in short-term, high quality, fixed income securities with a maximum maturity of 397 days or less. Variable securities shall have a maximum maturity of 2 years. STIP shall maintain a dollar-weighted average portfolio maturity of 60 days or less. This Pool is managed to preserve principal while providing 24-hour liquidity for state agency and local government participants.

Consolidated Asset Pension Pool (CAPP) – The Consolidated Asset Pension Pool (CAPP) invests directly in the underlying Pension Asset Classes (PAC) on behalf of the Montana Public Retirement Plans within the BOI-approved asset allocation ranges. Each PAC has an underlying set of investment objectives and investment guidelines. For liquidity purposes, each PAC and external manager has a limited amount of cash/cash equivalents. With the PAC, it is invested in the State Street Short Term Investment Fund (STIF), which invests in high quality short-term securities. For external managers, it is invested per BOI established guidelines.

CAPP'S Underlying Asset Classes

Domestic Equity	Broad Fixed Income
International Equity	U.S. Treasury / Agency
Private Equity	Investment Grade
Natural Resources	Mortgage Backed Securities
Real Estate	High Yield
TIPS	Cash
Diversifying Strategies	

Domestic Equity PAC – Invests primarily in U.S. traded equity securities such as common stock. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and exchange traded funds.

International Equity PAC – Invests primarily in international equity securities that trade on foreign exchanges in developed and emerging markets. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and exchange traded funds.

Private Equity PAC – Invests in the entire capital structure of private companies. Investments are made via Limited Partnerships managed by a General Partner. The Limited Partnerships typically have well-defined strategies such as buyout, venture, or distressed debt. Private Equity investments are considered long-term. Exchange traded funds are utilized to minimize the cash position.

Real Estate PAC – Invests primarily in real estate properties. Transactions are privately negotiated by a General Partner via a Limited Partnership or an open-end fund. The funds typically have well-defined strategies such as core, value-add, or opportunistic. Private Real Estate investments are considered long-term. Exchange traded funds are utilized to minimize the cash position.

Natural Resource PAC – Invests primarily in energy and timber investments, but could include agriculture, water or commodity related funds. The investments are made via Limited Partnerships managed by a General Partner, and the funds are considered long-term. Potential Investment vehicles could include open-end funds, master limited partnerships and exchange traded funds.

Intermediate Treasury Inflation Protected Securities (TIPS) PAC – Invests primarily in intermediate U.S. TIPS or Treasury securities that are indexed to inflation.

Intermediate U.S. Treasury/Agency PAC – Invests primarily in debt obligations of the U.S. government including its agencies and instrumentalities.

Broad Fixed Income PAC – Invests primarily in core fixed income securities as represented in the Bloomberg Barclays U.S. Aggregate Bond Index. The type of portfolio structures utilized are separately managed accounts, commingled accounts, and potentially exchange traded funds.

Intermediate Investment Grade PAC – Invests primarily in intermediate investment grade corporate bonds typically found in the Bloomberg Barclays U.S. Corporate Bond Index. It includes U.S. dollar denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers.

FINANCIAL SECTION

Mortgage Backed Securities PAC – Invests primarily in agency mortgage backed securities, asset backed securities and commercial mortgage backed securities.

High Yield PAC – Invests primarily in U.S. dollar denominated corporate bonds that are classified as high yield according to the major ratings agencies such as S&P, Moody's or Fitch. The type of portfolio structures utilized are separately managed accounts and potentially commingled accounts or exchange traded funds.

Cash PAC – Invests primarily in highly liquid, money-market type securities via STIP.

Diversifying Strategies PAC – Invests in a wide spectrum of global public securities investment types (including, but not limited to, equities, commodities, currencies, preferred stocks, convertible bonds, fixed income, and cash equivalents).

PERB Cash Equivalent and Investment Portfolio		
June 30, 2019		
<u>Investment Pools</u>	<u>Fair Value</u>	<u>Net Asset Value (NAV)</u>
Short-term Investment Pool	\$ 228,470,600	\$ 228,470,600
CAPP Investment Pool	7,408,828,340	7,408,828,340
Commingled Equity Securities ¹	4,734,434	
Total	\$ 7,642,033,374	\$ 7,637,298,940

¹ DC Disability OPEB is invested by the manager Blackrock in commingled equity index funds.

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical method are not classified in the fair value hierarchy. This is the case of the Consolidated Asset Pension Pool (CAPP) and the Short-Term Investment Pool (STIP).

The Consolidated Asset Pension Pool, CAPP, is a commingled internal investment pool managed and administered under the direction of Montana BOI as statutorily authorized by the Unified Investment Program. Only the retirement systems can participate in CAPP. On a monthly basis, redemptions are processed by BOI in order to maintain required asset allocations and to provide liquidity for retirement benefits. The fair values of the investments in this category have been determined using the Net Asset Value (NAV) per share (or its equivalent) of the investment.

STIP is an external investment pool managed and administered under the direction of BOI as statutorily authorized by the Unified Investment Program. It is a commingled pool for investment purposes and participant requested redemptions from the pool are redeemed the next business day. The fair values of the investments in this category have been determined using the NAV per share (or its equivalent) of the investment.

At June 30, 2019, the PERB's portion of the defined benefit investment pools is presented in the table below.

PERB Portions of BOI Pools at June 30, 2019		
<u>Investment</u>	<u>Fair Value</u> <u>June 30, 2019</u>	<u>PERB Portion</u> <u>June 30, 2019</u>
STIP	\$ 228,470,600	3.00%
CAPP	\$ 7,408,828,340	64.56%

Fair Value Measurement

The BOI categorizes their fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

Level 1: Unadjusted quoted prices for identical assets or liabilities in active markets that BOI can access as of June 30.

Level 2: Prices determined using inputs, other than quoted prices included within Level 1, which are observable for an asset or liability, either directly or indirectly. These inputs can include quoted prices for similar assets or liabilities in active or inactive markets, or market-corroborated inputs.

Level 3: Prices determined using unobservable inputs, which generally results in BOI using the best information available and may include the BOI's own data.

The *PERS-DCRP Disability OPEB* trust fund invests in commingled equity index funds through the manager Blackrock Institutional Trust Co., N.A (Blackrock), recorded under *Commingled Equity Securities* in the financial statements. During the fiscal year, the BOI determined it to be more appropriate to report the investments in commingled equity index funds with the level 1 category due to there being a sufficient level of observable activity with this type of fund investments being valued using a daily published price. Fixed income and equity investments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. These investments were disclosed at net asset value (NAV) in prior years.

The **Investment Risks** for the pooled investments in which the PERB participates in are described in the following paragraphs. Investments are administered by BOI, for the PERB, as part of the State of Montana's Unified Investment Program. The BOI Board approves all Investment Policy Statements (IPS) and is responsible for setting investment risk policies. BOI's stand-alone financial statements detail the investment risks associated with the securities held by the pools.

The CAPP as a mixed pool, and STIP as an external investment pool, are subject to an element of risk in all risk categories, with the exception of CAPP having the only risk in foreign currency.

Custodial Credit Risk - Custodial credit risk is the risk that, in the event of the failure of the counterparty to a transaction, the BOI will not be able to recover the value of the investment or collateral

securities that are in the possession of an outside party. Per policy, the Board's custodial bank must hold short-term and long-term credit rating by at least one Nationally Recognized Rating Organization (MRSRO with a minimum requirement of A1/P1 (short-term) and A3/A-1 (long-term). As of June 30, 2019, all investments were recorded under the BOI's name at their custodial bank, which met BOI's minimum rating requirement.

Concentration of Credit Risk - Concentration of credit risk is the risk of loss attributable to the magnitude of any single investment per issuer name. Investments explicitly guaranteed by the U.S. Government are excluded from the concentration of credit risk requirement. Concentration of credit risk is addressed with all IPS's as set by the BOI.

The STIP IPS limits concentration to credit risk exposure by limiting portfolio investment types to 3% in an issuer except for U.S. Treasury and U.S. Agency securities as well as any repurchase agreements with a financial institution.

Credit Risk - Credit risk is defined as the risk that an issuer or other counter-party to an investment will not fulfill its obligation. With the exception of U.S. Government securities, the fixed income instruments in the investment pools have credit risk as measured by major credit rating services. As of June 30, 2019, there was no significant credit quality risk associated with cash equivalents.

Foreign Currency Risk - Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. Per BOI policy, there are maximum restrictions that can be held on non-U.S. securities in a foreign currency and only CAPP is allowed to have foreign currency exposure. According to the CAPP IPS, the Investment Grade Credit Asset Class, Agency Mortgage Backed Securities Asset Class, and High Yield Asset Class sections have maximum restrictions that can be held. Currency exposures may be hedged, in a defensive manner, at the discretion of the active managers to preserve the U.S. dollar value of investment made. As of June 30, 2019, there was no significant credit quality risk associated with cash equivalents.

Interest Rate Risk - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. In accordance with GASB Statement No. 40, the BOI uses for CAPP the effective duration as a measure of interest rate risk for all fixed income portfolios and STIP uses the weighted average maturity (WAM).

According to the STIP investment policy “the STIP portfolio will minimize interest rate risk by:

- structuring the investment portfolio so securities mature to meet cash requirements for ongoing operations thereby normally avoiding the need to sell securities on the open market prior to maturity;
- maintaining a dollar-weighted average portfolio maturity (WAM) of 60 days or less (for this purpose, the date to the next coupon reset date will be used for all floating or variable rate securities), and
- STIP will maintain a reserve account.”

The PERB's investments subject to credit and interest rate risk at June 30, 2019 are categorized in the table on the top of the next page. Credit risk is disclosed using the weighted credit quality rating by investment type. Interest rate risk is disclosed using weighted effective duration.

Investment	Fair Value 6/30/2019	Credit Quality Rating ¹ 6/30/2019	Effective Duration 6/30/2019
CAPP	\$ 7,408,828,340	Range of BB- to AAA	Range of 1.88 - 8.08 Years
STIP	\$ 228,470,600	NR	41 days WAM ²
¹ CAPP has seven security investment types that are rated for credit and interest rate risk as of June 30, 2019, refer to BOI's UIP Financial Statements and IPSs for the investment types that are involved.			
² Weighted Average Maturity (WAM).			

Although the STIP investments have been rated by investment security type, STIP, as an external investment pool, has not been rated. As of June 30, 2019, STIP's portfolio may hold certain fixed and variable rate securities. Interest payments on these securities are based on an underlying reference rate, example is Secured Overnight Financing Rate (SOFR).

Securities Lending Collateral, governed under the provisions of state statutes, BOI authorized the custodial bank, State Street Bank, to lend BOI's securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The custodial bank is required to maintain collateral equal to 102 percent of the fair value of domestic securities and 105 percent of the fair value of international securities while the securities are on loan. On any day, including June 30th, the markets may move in a positive or negative direction resulting in under or over collateralization. The custodial bank compensates for market movement by recalculating on the following business day to meet the collateralization requirements. BOI and the custodial bank split the earnings, 80% and 20% respectively, on security lending activities. BOI retains all rights and risks of ownership during the loan period. The custodial bank indemnifies the BOI's credit risk exposures to the borrowers. Only CAPP participates in the security lending. There were no failures by any borrowers to return or pay distributions thereon during the period that resulted in a declaration and notice of Default of the Borrower. As of June 30, 2019, no securities were recalled and not yet returned.

Stable Value - Montana Fixed Fund

The Montana Fixed Fund is a stable value investment option of the PERS-DCRP and the deferred compensation plan. It is administered through outside vendors, the stable value manager Pacific Investment Management Company LLC (PIMCO); the custodial bank, State Street Bank and Trust Company (State Street); and third-party synthetic Guaranteed Interest Contract (GIC) providers - Transamerica Premier Life Insurance Company (Transamerica), Prudential Insurance Company of America (Prudential) and Voya Retirement Insurance and Annuity Company (Voya). The Montana Fixed Fund employs a synthetic stable value strategy in which the stable value manager, PIMCO, manages a diversified bond portfolio and third party insurers, Transamerica, Prudential, and Voya guarantee the participants' principal investments and earnings in accordance with terms of the respective contract with the GIC provider. Transamerica, Prudential, and Voya calculate a rate of return each quarter called the "crediting rate", which helps smooth participants' earnings over time. The crediting rates are based on the investment manager's portfolio market value, yield, and duration in accordance with the terms of the respective contracts with the GIC providers. The Montana Fixed Fund's structure incorporates a money market-like liquidity strategy and the custodial bank calculates a blended return of the individual crediting rates and liquidity strategy for member investments. The custodial bank also calculates a Net Asset Value (NAV) that is based on the value invested in the GIC contracts, plus earning, and the liquidity strategy.

FINANCIAL SECTION

The PERS-DCRP and deferred compensation plans' stable value investments are synthetic guaranteed investment contracts (GIC) that are fully benefit responsive, measured at contract value, and do not participate in fair value changes.

All money invested in the Montana Fixed Fund of the PERS-DCRP and deferred compensation plan are held in a Pooled Trust. The Pooled Trust qualifies as a group trust under sections 401(a), including section 401(a)(24) and 501(a), of the Internal Revenue Code (IRC) of 1986, as amended. The Pooled Trust assets are invested by PIMCO and are held under a custodial agreement with State Street. The Pooled Trust assets are invested by PIMCO based on an investment guideline schedule described in the Montana Fixed Fund investment policy established by the PERB. Additional investment constraints are contained in the investment management agreement between PERB and PIMCO, and within the respective contracts issued by each GIC provider to the Pooled Trust.

The Montana Fixed Fund is subject to investment risks associated with GIC contracts and with the bond portfolio managed by PIMCO. These risks may include, but are not limited to, the following:

Credit Risk: Credit risk is the chance that bond issuer will fail to pay interest and principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of the bond to decline. With the exception of the U.S. Government securities, fixed income instruments have credit risk as measured by major credit rating services. Obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality. The total investments credit quality rating for Montana Fixed Fund is AA.

Interest Rate Risk: Interest rate risk is the chance that bond prices overall will decline because of rising interest rates. The bond account has low to moderate interest rate risk as it invests primarily in short-term and intermediate-term bonds, whose prices are less sensitive to interest rate changes than are the prices of long-term bonds. As of June 30, 2019, in accordance with GASB Statement No. 40, PIMCO has selected the effective duration method to disclose interest rate risk. The total effective duration for Montana Fixed Funds fixed income investments, as of June 30, 2019, is 3.82 years.

Foreign Currency Risk: Currency risk is the change that the value of a foreign investment, measured in U.S. dollars, will decrease because of unfavorable changes in currency exchange rates. The Montana Fixed Fund may include securities subject to foreign currency risk.

Default Risk: Default risk is the chance that companies or individuals will be unable to make the required payments on their debt obligations.

Derivative Risk: Derivative risk arises when the underlying fund invests in derivatives, which may involve risks different from, and possibly greater than, those of investments directly in the underlying securities or assets.

GIC Contract Risk: GICs are issued by insurance companies, banks, and other financial institutions and are intended to help reduce the volatility of any associated fixed income investments. These investment contracts include terms and conditions that can cause withdrawals or transfers from the investment contracts to occur at the lower of the contract's value or the value of the associated fixed

income investments. Examples of these terms include, but are not limited to: (1) a withdrawal from the contract or plan not in accordance with its stated withdrawal provisions; (2) the plan fails to be administered in accordance with the plan documents; (3) an event or condition such as the plan's change of control, termination, insolvency, loss of its tax-exempt status, change in laws or accounting rules applicable to plan; or (4) other events resulting in a material and adverse financial impact on the contract issuer as may be set out in the specific contract, such as changes in the tax code or applicable laws or regulations. Also, the contract counter-party could default, become insolvent, file for bankruptcy protection, or otherwise be deemed by the plan's auditor to no longer be financially responsible. There are a limited number of investment contract providers and, due to market conditions or other factors, enough contracts may not be available to obtain the desired amount of coverage.

Variable Investments for the PERS-DCRP and deferred compensation plan are held and managed in a selection of retail and institutional mutual funds, which cover all standard asset classes and categories. The selection of offered mutual funds is designed to provide participants with the ability to diversify investments and meet their individual investment goals and strategies. With advice from an independent investment analyst and assistance from the statutorily-created Employee Investment Advisory Council (EIAC), the PERB conducts annual reviews of the offered mutual funds. The goal of the reviews is to ensure that the offered mutual funds meet standards established in the Investment Policy Statements adopted by the PERB. Each investment alternative is compared to its peers and an appropriate benchmark. *Concentration of Credit Risk* is not addressed in the investment policy statements and investments in mutual funds are not required to be disclosed.

Life Insurance Investment Option

Deferred compensation plan participants previously had the option to direct a portion of their deferrals to a term life insurance policy provided through Allianz Life Insurance. The ability to invest in life insurance is allowed under the IRC and was offered to plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however, plan participants who had previously elected this option may continue.

Available investment options in the PERS-DCRP and deferred compensation plan are listed on page 92. A current listing may also be obtained by contacting MPERA.

The valuation method for investments measured at the net asset value (NAV) per share (or its equivalent) is presented in the following table for the defined benefit investments and on page 61 for the defined contribution investments.

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PERB Defined Benefit Investments Measured at Fair Value

	June 30, 2019	Fair Value Measurements Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable (Level 3)
Investments by fair value level				
Commingled Equity Securities ¹	\$ 4,734,434	\$ 4,734,434		
Total Investments by fair value level	<u>\$ 4,734,434</u>	<u>\$ 4,734,434</u>		
Investments measured at the net asset value (NAV)				
CAPP Investment Pool ²	\$ 7,408,828,340			
Short Term Investment Pool (STIP)	228,470,600			
Total investments measured at the NAV	<u>7,637,298,940</u>			
Total investments measured at fair value	<u>\$ 7,642,033,374</u>			

¹ The DC Disability OPEB trust fund is invested by the manager Blackrock in commingled equity index funds measured at the Level 1 category in the fair value hierarchy.

² CAPP Investment Pool replaces five investment pools that have been previously reported prior to fiscal year 2017.

PERB Defined Benefit Investments Measured at Net Asset Value (NAV)

	June 30, 2019			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
CAPP Investment Pool ¹	\$ 7,408,828,340		Monthly	30 days
Short Term Investment Pool (STIP)	228,470,600		Daily	1 day
Total investments measured at the NAV	<u>\$ 7,637,298,940</u>			

¹ CAPP Investment Pool replaces five investment pools that have been previously reported prior to fiscal year 2017.

PERB Defined Contribution and Deferred Compensation Investments

	Fair Value Measurements Using			
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable (Level 3)
	June 30, 2019			
Investments by fair value level				
Total Investments by fair value level ¹				
Investments measured at the net asset value (NAV)				
Montana Fixed Fund (Stable Value Pool) ²	\$ 251,085,307			
Variable Pooled Investments ³	542,080,143			
Short Term Investment Pool ⁴	1,733,239			
Allianz Life Insurance Investment ⁵	12,316			
Total investments measured at the NAV	\$ 794,911,005			
Total investments measured at fair value	\$ 794,911,005			

¹ All investments are pooled and measured at net asset value (NAV) and not within the fair value level hierarchy.

² The Montana Fixed Fund is a stable value option that invests in cash, other liquid investments, and synthetic Guaranteed Investment Contract (GICs) that are fully benefit-responsive and is reported at contract value.

³ The Variable Pooled Investments are all mutual funds measured at Net Asset Value (NAV).

⁴ Short Term Investment Pool (STIP) is an external investment pool managed and administered through Montana Board of Investments (BOI) and fair values are determined using the Net Asset Value (NAV) per share for the investment.

⁵ Term life insurance policy investment option provided through Allianz Life Insurance. This option was offered to deferred compensation plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however plan participants who had previously elected this option may continue.

PERB Defined Contribution and Deferred Compensation Investments Measured at Net Asset Value

	June 30, 2019			
	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Montana Fixed Fund (Stable Value Pool) ¹	\$ 251,085,307		Daily	None
Variable Pooled Investments ²	542,080,143		Daily	None
Short Term Investment Pool ³	1,733,239		Daily	1 day
Allianz Life Insurance Investment ⁴	12,316		Daily	None
Total investments measured at the NAV	\$ 794,911,005			

¹ The Montana Fixed Fund is a stable value option that invests in cash, other liquid investments, and synthetic Guaranteed Investment Contract (GICs) that are fully benefit-responsive and are reported at contract value.

² The Variable Pooled Investments are all mutual funds measured at Net Asset Value (NAV).

³ Short Term Investment Pool (STIP) is an external investment pool managed and administered through Montana Board of Investments (BOI).

⁴ Term life insurance policy investment option provided through Allianz Life Insurance. This option was offered to deferred compensation plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however plan participants who had previously elected this option may continue.

The fair values are determined using the Net Asset Value (NAV) per share for the investment.

NOTE B. LITIGATION

Each of the plans administered by the PERB may be involved in various claims and legal actions arising in the ordinary course of business. In the opinion of management and legal counsel, the disposition of the Tadman matter below should not have a material, adverse effect on any plan's financial position as a whole. In the opinion of management and legal counsel, the disposition of the Murnion matter below could have a material, adverse effect, in the aggregate, on the PERS plan's financial position as a whole. An estimate of the potential liability for the Murnion case cannot be made.

Tadman, et al. v. State of Montana. A retired member of the Sheriffs' Retirement System filed a class action in the 8th Judicial District of Montana against the State of Montana on October 6, 2015, alleging the inappropriate advising, reporting, and withholding of state and federal income taxes on certain line-of-duty disability benefits before conversion to a normal retirement benefit. Plaintiff is represented by Lawrence A. Anderson, an attorney in Great Falls, Montana. The State was served with the Complaint on November 25, 2015, and is represented by Jean Faure and Jason Holden of the Faure Holden law firm in Great Falls, MT. On June 11, 2019 the Court issued an Order granting Plaintiff's Motion to Certify Class. The Court has defined the prospective class of plaintiffs in this matter and the parties were instructed by the Court to meet and confer to agree on the class form of notice and notice plan concerning the matter.

Murnion v. MPERA and MPERB. A retired member of the Public Employee Retirement System appealed a Final Order of the Montana Public Employees' Retirement Board upholding the Hearing Examiner's Proposed Findings of Fact and Conclusions of Law determining that the retired member was not entitled to full-time PERS service credit for his part-time years of employment. On March 15th, 2019, the retired member filed a "Petition for Appeal of Agency Action and Complaint" in the First Judicial District of Montana in order to appeal the Board's Final Order under the provisions of the Montana Administrative Procedure Act (MAPA). On June 26th, 2019 MPERA filed a motion to 1) vacate any forthcoming Scheduling Order, 2) set a briefing schedule to control the judicial review of this matter, and 3) dismiss the retired member's Count II and III for failure to state a claim within the Court's jurisdiction, or, in the alternative, confine any review of each claim to the administrative record. On July 12th, 2019 a Scheduling Order was issued by the Court calling for additional periods for discovery and setting a date for a two-day non-jury bench trial beginning on July 8, 2020. On July 15th, Petitioner filed a response to MPERA's motion, and MPERA filed a reply on July 19th, 2019. A notice of submittal was filed by MPERA on July 22nd, 2019.

NOTE C. PLAN DESCRIPTIONS, MEMBERSHIP AND CONTRIBUTION INFORMATION

The plans are established and amended statutorily by the Legislature. In all defined benefit plans (except VFCA), if a member leaves covered employment before retirement, the member contributions plus accrued interest (accumulated contributions) may be refunded to the member. If a member returns to service and repays the withdrawn accumulated contributions plus the interest the accumulated contributions would have earned had they remained on deposit, service credit is restored.

DEFINED BENEFIT RETIREMENT PLANS

PLAN DESCRIPTIONS

Public Employees' Retirement System-DBRP (PERS-DBRP)

The PERS-Defined Benefit Retirement Plan (DBRP) is a multiple-employer, cost-sharing plan established July 1, 1945, and governed by Title 19, chapters 2 & 3, Montana Code Annotated (MCA). This plan covers the State, local governments, certain employees of the Montana University System and school districts.

All new members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to remain in the PERS-DBRP or join the PERS-DCRP by filing an irrevocable election. Members may not be members of both the defined benefit and defined contribution retirement plans. All new members from the universities also have a third option to join the university system's Montana University System Retirement Program (MUS-RP).

The PERS-DBRP provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are established by state law and can only be amended by the Legislature. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service.

Public Employees' Retirement System-DBRP Education Fund: Education is provided to all members of the PERS regardless of plan choice as governed by section 19-3-112, MCA. The education must be presented with impartial and balanced information about plan choices, investments and retirement planning.

The education program consists of ongoing transfer education for new members and investment/retirement planning education for all active members.

Plan Membership Elections: MPERA has included in the financial statements \$1,968,902 in *Transfers to DCRP* and \$232,194 in *Transfers to MUS-RP*. These transfers reflect the DCRP and MUS-RP contributions of participants that filed elections at or near the June 30 cutoff date. The contributions were transferred in early fiscal year 2020.

Public Employees' Retirement System - DCRP Disability OPEB (DCRP Disability OPEB)

The DCRP Disability OPEB is considered a cost-sharing multiple-employer plan that provides an other post-employment defined benefit for the PERS-DCRP members.

All new PERS members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to remain in the PERS-DBRP or join the PERS-DCRP by filing an irrevocable election. Members may not be members of both the defined benefit and defined contribution retirement plans. The PERS-DCRP provides disability benefits to eligible members who elect the PERS-DCRP.

FINANCIAL SECTION

The DCRP Disability OPEB Trust Fund was established on July 1, 2002, and is governed by section 19-3-2141, MCA. Benefits of this long-term disability plan are established by state law and can only be amended by the Legislature. This benefit is based on eligibility, years of service, and compensation. Member rights are vested after five years of service.

As of June 30, 2019, there are ten members receiving a benefit from the disability plan, two more than as of June 30, 2018.

GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans will not be implemented at this time due to the liability being immaterial to the plan as a whole.

Judges' Retirement System (JRS)

The JRS is a single-employer defined benefit plan established in 1967, and governed by Title 19, chapters 2 & 5 of the MCA. This plan provides benefits for all Montana judges of the district courts, justices of the Supreme Court, the Chief Water Judge and the Associate Water Judge. Benefits are established by state law and can only be amended by the Legislature. The JRS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights are vested after five years of service.

Highway Patrol Officers' Retirement System (HPORS)

The HPORS is a single-employer, defined benefit plan established July 1, 1945, and governed by Title 19, chapters 2 & 6 of the MCA. This plan provides retirement benefits to all members of the Montana Highway Patrol, including supervisory personnel. Benefits are established by state law and can only be amended by the Legislature. The HPORS provides retirement, disability, and death benefits to plan members and their statutory beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights for death and disability are vested immediately. All other rights are vested after five or ten years of service.

Deferred Retirement Option Program (DROP): Eligible members of HPORS can participate in the DROP by filing a one-time irrevocable election with the PERB. The DROP is governed by Title 19, chapter 6, part 10. A member must have completed at least twenty years of membership service to be eligible. The member may elect to participate in the DROP for a minimum of one month and a maximum of 60 months and may participate in the DROP only once. A participant remains a member of the HPORS, but will not receive membership service or service credit in the system for the duration of the member's DROP period. During participation in the DROP, all mandatory contributions continue to the retirement system, except the member contribution which goes to the member's DROP account. A monthly benefit is calculated based on salary and years of service to date as of the beginning of the DROP period. The monthly benefit is paid into the member's DROP account until the end of the DROP period. At the end of the DROP period, the participant may receive the balance of the DROP account in a lump-sum payment or in a direct rollover to another eligible plan, as allowed by the IRS. If the participant continues employment after the DROP period ends, they will again accrue membership service and service credit. The DROP account cannot be distributed until the employment is formally terminated. As of June 30, 2019, there were 18 DROP participants. Since

program inception, a total of 22 members have participated in the DROP. The balance of the DROP accounts is \$2.0 million.

Sheriffs' Retirement System (SRS)

The SRS is a multiple-employer, cost-sharing defined benefit plan established July 1, 1974, and governed by Title 19, chapters 2 & 7, MCA. This plan provides retirement benefits to all Department of Justice criminal and gambling investigators hired after July 1, 1993, all detention officers hired after July 1, 2005, and to all Montana sheriffs. Benefits are established by state law and can only be amended by the Legislature. The SRS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service.

Game Wardens' and Peace Officers' Retirement System (GWPORS)

The GWPORS is a multiple-employer, cost-sharing defined benefit plan established in 1963 and governed by Title 19, chapters 2 & 8, MCA. This plan provides retirement benefits to all persons employed as a game warden, warden supervisory personnel, or state peace officer. Benefits are established by state law and can only be amended by the Legislature. The GWPORS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and highest average compensation. Member rights are vested after five years of service.

Municipal Police Officers' Retirement System (MPORS)

The MPORS is a multiple-employer, cost-sharing defined benefit plan established in 1974 and is governed by Title 19, chapters 2 & 9 of the MCA. This plan covers all municipal police officers employed by first- and second-class cities and other cities that adopt the plan. Benefits are established by state law and can only be amended by the Legislature. The MPORS provides retirement, disability, and death benefits to plan members and their statutory beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights for death and disability are vested immediately. All other rights are vested after five years of service.

Deferred Retirement Option Plan (DROP): Eligible members of MPORS can participate in the DROP by filing a one-time irrevocable election with the PERB. The DROP is governed by Title 19, chapter 9, part 12, MCA. A member must have completed at least twenty years of membership service to be eligible. They may elect to participate in the DROP for a minimum of one month up to a maximum of 60 months and may participate in the DROP only once. A participant remains a member of the MPORS, but will not receive membership service or service credit in the system for the duration of the member's DROP period. During participation in the DROP, all mandatory contributions continue to the retirement system. A monthly benefit is calculated based on salary and years of service as of the beginning of the DROP period. The monthly benefit is paid into the member's DROP account until the end of the DROP period. At the end of the DROP period, the participant may receive the balance of the DROP account in a lump-sum payment or in a direct rollover to another eligible plan, as allowed by the IRS. If the participant continues employment after the DROP period ends, they will again accrue membership service and service credit. The DROP account cannot be distributed until employment is formally terminated. As of June 30, 2019, there were 64 DROP participants. Since program inception, a total of 179 members have participated in the DROP. The balance of the DROP accounts is \$9.5 million.

Firefighters' Unified Retirement System (FURS)

The FURS is a multiple-employer, cost-sharing defined benefit plan established in 1981, and governed by Title 19, chapters 2 & 13, MCA. This plan provides retirement benefits to firefighters employed by first- and second-class cities or by other cities and rural fire district departments that adopt the plan; and to firefighters hired by the Montana Air National Guard (MANG) on or after October 1, 2001. Benefits are established by state law and can only be amended by the Legislature. The FURS provides retirement, disability, and death benefits to plan members and their beneficiaries. Benefits are based on eligibility, years of service, and compensation. Member rights for death and disability are vested immediately. All other member rights are vested after five years of service.

Volunteer Firefighters' Compensation Act (VFCA)

The VFCA is a multiple-employer, cost-sharing defined benefit plan. This compensation plan was established in 1965 and is governed by Title 19, chapter 17, MCA. All members are unpaid volunteers and the State of Montana is the only contributor to the plan. Benefits are established by state law and can only be amended by the Legislature. The VFCA provides pension, disability, and survivorship benefits for all eligible volunteer firefighters who are members of qualified volunteer fire companies in unincorporated areas, towns or villages and includes volunteer fire departments, fire districts, and fire service areas under the laws of the State of Montana. Benefits are based on eligibility and years of service. Member rights are vested after ten years of credited service. VFCA also provides limited benefits for death or injuries incurred in the line of duty.

A member who chooses to retire and draw a pension benefit may return to service with a volunteer fire department without loss of benefits. However, a returning retired member may not be considered an active member accruing credit for service.

VFCA is a qualified Length of Service Award Plan (LOSAP) under 457(e)(11)(B) of the Internal Revenue Service tax code. This is only for tax reporting purposes. This does not change any requirements of the program.

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MEMBERS AND EMPLOYERS

Membership in each plan as of June 30, 2019 is detailed in the following chart.

Plan Membership as of Fiscal Year End June 30, 2019										
Type of Plan for Reporting Purposes as of Fiscal Year End June 30, 2019	Single-Employer Defined Benefit		Multi-Employer Defined Benefit						Multi-Employer Defined Contribution	
Plan Designation	JRS	HPORS ¹	PERS-DBRP ²	SRS	GWPORS	MPORS ¹	FURS	VFCA	PERS-DCRP	457
Classification of Member										
Active	58	232	28,908	1,454	1,021	806	722	2,249	2,871	4,922
Inactive: entitled to, but not yet receiving benefits or a refund:										
Vested	2	18	3,943	135	138	94	36	777	559	4,618
Non-Vested	1	25	19,316	633	447	164	67		713	
Inactive members and beneficiaries currently receiving benefits:										
Service Retirements	68	324	22,592	673	332	786	632	1,484	111	
Disability Retirements		6	146	29	4	32	10	1	10	
Survivor benefits	5	12	507	24	10	32	19	3	2	
Total Membership	134	617	75,412	2,948	1,952	1,914	1,486	4,514	4,266	9,540

¹ Includes DROP in the Active count.

² The PERS-DBRP Inactive Non-Vested count includes dormant accounts that were previously not counted.

Active Defined Benefit Membership by Employer Type ¹						
Employer Type	PERS-DBRP		SRS		GWPORS	
As of Fiscal Year End June 30, 2019	2019	2018	2019	2018	2019	2018
State Agencies ²	10,141	10,059				
Department of Justice			62	55		
Department of Corrections					736	725
Department Fish, Wildlife & Parks					112	113
Department of Livestock					46	41
Department of Transportation					86	85
Counties	5,537	5,514	1,392	1,374		
Cities and Towns	3,553	3,550				
Colleges and Universities	2,723	2,647			41	46
School Districts	5,664	5,630				
High Schools	67	74				
Other Agencies	1,223	1,172				
Total	28,908	28,646	1,454	1,429	1,021	1,010

¹ Defined benefit plans that have more than one employer and do not have a minimum benefit adjustment for their retirees, only a Guaranteed Annual Benefit Adjustment (GABA) at retirement.

² For the purposes of this schedule, "State Agencies" for PERS-DBRP includes all 33 agencies for the State of Montana.

Active Defined Benefit Membership by Employee Type ¹							
Employee Type	JRS		HPORS ²		MPORS ²		FURS
As of Fiscal Year End June 30,	2019	2018	2019	2018	2019	2018	2019 2018
GABA	56	52	232	233	802	783	720 688
Non-GABA	2	3	0	0	4	4	2 3
Total	58	55	232	233	806	787	722 691

¹ Retirees are eligible for a Guaranteed Annual Benefit Adjustment (GABA) or a minimum benefit adjustment depending on their election of GABA or Non-GABA at time of hire.

² Includes DROP in the count.

FINANCIAL SECTION

Participating Defined Benefit Employers									
Employer Type	PERS-DBRP		SRS ¹		GWPORS ²		MPORS		FURS ³
As of Fiscal Year End June 30,	2019	2018	2019	2018	2019	2018	2019	2018	2019 2018
State Agencies	33	34	1	1	4	4			1 1
Counties	55	55	56	56					
Cities and Towns	98	98					33	33	15 15
Colleges and Universities	5	5			3	3			
School Districts	238	235							
High Schools	5	5							
Other Agencies	112	112							
Rural Fire Districts									11 11
Total	546	544	57	57	7	7	33	33	27 27

¹ The State Agency for SRS is the Department of Justice.
² The State Agencies for GWPORS are Department of Corrections, Department of Fish, Wildlife & Parks, Department of Livestock, and Department of Transportation.
³ The State Agency for FURS is the Department of Military Affairs.

Not listed are JRS and HPORS, both with one employer each. JRS has the State Agency - Supreme Court and HPORS has the State Agency - Department of Justice.

HPORS DROP Participation		
As of June 30	2019	2018
Participants Beginning of Year	13	10
Participants Added	7	5
Completed DROP	2	2
Participants End of Year	18	13
DROP Distributions	\$248,628	\$231,957

MPORS DROP Participation		
As of June 30	2019	2018
Participants Beginning of Year	62	61
Participants Added	19	12
Completed DROP	17	11
Participants End of Year	64	62
DROP Distributions	\$3,379,901	\$2,061,444

The active membership and participating employers for **PERS-DCRP Disability OPEB** are represented in the following tables:

PERS-DCRP PARTICIPATING EMPLOYERS		
Employers	June 30, 2019	June 30, 2018
State Agencies	31	32
Counties	51	53
Cities and Towns	57	58
Universities	5	5
School Districts	122	117
High Schools	5	4
Other Agencies	49	47
Total	320	316

PERS-DCRP Active Membership by Employer Type		
Employer Type	June 30, 2019	June 30, 2018
State Agencies	1,397	1,296
Counties	439	416
Cities	334	320
Universities	156	143
High Schools	5	5
School Districts	332	301
Other Agencies	208	209
Total	2,871	2,690

FY 2019 Schedule of Contribution Rates

System	Member	Employer	State
PERS-DBRP¹	7.9% [19-3-315(1)(a), MCA]	8.67% State & University 8.57% Local Governments 8.3% School Districts (K-12) [19-3-316, MCA]	0.1% of Local Government payroll – paid from the General Fund 0.37% School Districts (K-12) payroll – paid from the General Fund [19-3-319, MCA]
PERS-DCRP¹	7.9% [19-3-315(1)(a), MCA]	8.67% State & University 8.57% Local Governments 8.3% School Districts (K-12) [19-3-316, MCA]	0.1% of Local government payroll – paid from the General Fund 0.37% School Districts (K-12) payroll – paid from the General Fund [19-3-319, MCA]
PERS-DCRP Disability OPEB		0.3% - an allocation of the DCRP employer contribution [19-3-2117, MCA]	
JRS²	7.0% [19-5-402, MCA]	25.81% [19-5-404, MCA]	
HPORS	13.0% - hired prior to 7/01/97 & not electing GABA 13.05% - hired after 6/30/97 & members electing GABA [19-6-402, MCA]	28.15% [19-6-404(1), MCA]	10.18% of salaries – paid from the General Fund [19-6-404(2), MCA]
SRS	10.495% [19-7-403, MCA]	13.115% [19-7-404, MCA]	
GWPORS	10.56% [19-8-502, MCA]	9.0% [19-8-504, MCA]	
MPORS	7.0% - hired after 6/30/75 & prior to 7/1/79 & not electing GABA [19-9-710(1)(a), MCA] 8.5% - hired after 6/30/79 and prior to 7/1/97 & not electing GABA [19-9-710(1)(b), MCA] 9.0% - hired after 6/30/97 & members electing GABA [19-9-710(1)(c), MCA & 19-9-710(2), MCA]	14.41% [19-9-703, MCA]	29.37% of salaries – paid from the General Fund [19-9-702, MCA]
FURS	9.5% - hired prior to 7/1/97 & not electing GABA [19-13-601(2)(a), MCA] 10.7% - hired after 06/30/97 & members electing GABA [19-13-601(2)(b), MCA]	14.36% [19-13-605, MCA]	32.61% of salaries – paid from the General Fund [19-13-604, MCA]
VFCA			5.0% of fire insurance premium tax, paid from the General Fund [19-17-301, MCA]

¹ The employer and/or member contribution rates increase on July 1, 2019 for PERS-DBRP and PERS-DCRP.

² The employer contributions have been temporarily suspended for JRS beginning the first full pay period of January 2018 until after the last full pay period of June 2019, when the employer contribution will return to 25.18%.

CONTRIBUTIONS

Member and employer contribution rates are established by state law and may be amended only by the Legislature.

Member contributions are deducted from each member's salary and remitted by participating employers. An individual account is established for each member's contributions and interest allocations until a request for retirement or refund is processed.

- For **PERS-DBRP**, the 7.9% member contributions will be decreased to 6.9% on January 1 following actuary valuation results that show the amortization period has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and additional member contribution rates. There will be no reduction to the member contributions on January 1, 2020 due to the amortization period being 36 years at June 30, 2019.
- The **PERS-DBRP** employee education program is funded by 0.04% of the employer's contributions.
- For **MPORS**, member contribution rates are dependent upon date of hire as a police officer.

Employer contributions for **PERS-DBRP** temporarily increased 1.0%, effective July 1, 2013. Further, employer contributions increase an additional 0.1% a year over 10 years beginning July 1, 2014, through 2024. The employer additional contributions, including the 0.27% added in 2007 and 2009, terminate on January 1 following actuary valuation results that show the amortization period has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and member contribution rates. Based on the June 30, 2019 actuarial valuation, the additional contributions will not be terminated on January 1, 2020.

- For **PERS-DBRP** (§19-3-1106, MCA), **SRS** (§19-7-1101, MCA), and **FURS** (§19-13-1101, MCA), employer contributions are required to be paid on working retiree compensation. Member contributions are not required for working retirees.
- Under section 19-3-2117, MCA the employers are the only contributors to the **DCRP Disability OPEB**. The employer contribution rate is 0.30% of a DCRP member's compensation, which is allocated to the long-term disability plan trust fund to provide disability benefits to eligible DCRP members.
- As a result of the November 2017 Special Legislative Session, Senate Bill 1 was passed temporarily suspending **JRS** employer contributions beginning the first full pay period of January 2018. This temporary suspension terminates immediately after the last full pay period of June 2019 with employer contributions returning to 25.81% at this time.
- For the **SRS**, during the 2017 Legislative Session, House Bill 383 was passed temporarily increasing both the employee and employer contributions. Effective July 1, 2017, the employee

contributions increased from 9.245% to 10.495%. The employer had an additional contribution increase of 3%, from 0.58% to 3.58%, for a total employer contribution rate of 13.115%. The employee contributions will return to 9.245% and the employer contributions will return to 9.535% when reducing the employee contribution and terminating the additional employer contributions will not cause the amortization period to exceed 25 years.

State contributions and appropriations

- **PERS-DBRP** receives a supplemental state appropriation from the general fund of the State of Montana. The total amount received for fiscal year 2019 was \$33.6 million. These are recorded as *State Appropriations* on the financial statements.
- The State contributions for **MPORS** and **FURS**, are requested at the beginning of the fiscal year based on the previous fiscal year compensation and are due no later than November 1.
- The State is the only contributor to the **VFCA**. Contributions are 5% of fire insurance premium taxes collected on certain fire risks. The State Auditor makes annual payments from the general fund to the Volunteer Firefighters' Compensation Act fund.

ADDITIONAL SERVICE PURCHASE DUE TO A REDUCTION IN FORCE

Section 19-2-706, MCA allows state and university system active employees of **PERS-DBRP**, **HPORS**, **SRS**, **GWPORS**, and **FURS** who are eligible for a service retirement and whose positions have been eliminated due to a reduction in force, to have their employer pay a portion of the total cost of purchasing up to three years of "1-for-5" additional service. The employer has up to ten years to complete payment for the service purchases and is charged the actuarially required rate of return as established by the PERB on the unpaid balance.

- The **PERS-DBRP** employees participating under section 19-2-706, MCA increased from 254 in fiscal year 2018 to 260 in fiscal year 2019. The contributions received (including interest) during fiscal year 2019 totaled \$136,723. These are recorded in the *Accounts Receivable* on the financial statements. The outstanding balance at June 30, 2019, totaled \$12,762. This is recorded as *Notes Receivable* on the financial statements.
- Three **SRS** employees have taken advantage of this provision to date. All purchases are paid in full.
- No **HPORS**, **GWPORS**, or **FURS** employees have taken advantage of this provision to date.

SUPPLEMENTAL PAYMENTS

- *Supplemental Benefit for Retirees:* Section 19-6-709, MCA provides eligible **Montana highway patrol officers** retired prior to July 1, 1991, or their survivors, an annual supplemental lump-sum payment distributed each September. This lump-sum payment is funded by a statutory appropriation requested by the PERB from the general fund. Factors impacting

eligibility include the number of years the recipient has received a service retirement benefit or disability benefit, the recipient's age, and whether the recipient is employed in a position covered by a retirement system under Title 19.

- *VFCA Group Insurance Payments:* Supplemental payments are available to qualified volunteer fire companies that provide additional group medical insurance for their members in case of death or injury incurred while in the line of duty. The payment is made to the volunteer fire companies and is equal to \$75 per year for each mobile firefighting unit owned by the volunteer fire company, up to a maximum of two units.

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DEFINED BENEFIT PLAN PROVISIONS

System	Common provisions and terms			
	Compensation period for benefit calculation	Vesting	Eligibility	Benefit Multiplier
PERS-DBRP	Member's highest average compensation (HAC): * Pre-7/01/2011 - consecutive 36 months; * 7/01/2011 - consecutive 60 months; * 7/01/2013 - 110% annual cap on HAC compensation.	5 years	Pre-7/01/2011 * 30 years service, any age or * 5 years, age 60 or * any years, age 65 7/01/2011 * 5 years, age 65, or * any years, age 70	Pre-7/01/2011 * < 25 years: 1.78571% * 25 years or more: 2% 7/01/11 * < 10 years: 1.5% * 10-29 years: 1.78571% * 30 years or more: 2%
JRS	Member's current salary or highest average compensation (HAC): * Pre-7/01/1997 and non-GABA - monthly compensation at retirement; * 7/01/1997 or electing GABA - consecutive 36 months; * 7/01/2013 - 110% annual cap on HAC compensation.	5 years	5 years, age 60	* Up to 15 years: 3.33% * 15 years or more: 1.785% for each year > 15 years
HPORS	Member's highest average compensation (HAC): * Consecutive 36 months; * 7/01/2013 - 110% annual cap on HAC compensation.	Pre-7/01/2013 5 years 7/01/2013 10 years	20 years, any age	2.6% per year
SRS	Member's highest average compensation (HAC): * Pre-7/01/2011 - consecutive 36 months; * 7/01/2011 - consecutive 60 months; * 7/01/2013 - 110% annual cap on HAC compensation.	5 years	20 years, any age	2.5% per year
GWPORS	Member's highest average compensation (HAC): * Pre-7/01/2011 - consecutive 36 months; * 7/01/2011 - consecutive 60 months; * 7/01/2013 - 110% annual cap on HAC compensation.	5 years	* 20 years, age 50 or * 5 years, age 55	2.5% per year

FINANCIAL SECTION

System	Compensation period for benefit calculation	Vesting	Eligibility	Benefit Multiplier
MPORS	Member's final average compensation (FAC): * Pre-7/01/1977 - average monthly compensation at retirement. * 7/01/1977 - FAC last consecutive 36 months. * 7/1/2013 - 110% annual cap on FAC compensation.	5 years	* 20 years, any age or * 5 years, age 50	2.5% per year
FURS	Member's compensation: * Pre-7/01/1981 and no GABA - highest monthly compensation (HMC); * 7/01/1981 and GABA - HAC instead of HMC consecutive 36 months. * 7/1/2013 - 110% annual cap on HAC compensation.	5 years	* 20 years, any age or * 5 years, age 50	* Pre-7/1/1981 and no GABA: 2% per year if less than 20 years, and * 50% + 2% per year if greater or equal to 20 years * Post 7/1/1981 and GABA: 2.5% per year
VFCA	No compensation	10 years	* 20 years, age 55 or * 10 years, age 60	* 10 - 20 years: \$8.75 per credited year * 20 years or more: \$7.50 per credited year * Post 7/01/2011, actuarially sound, and 30 years or more: \$7.50 per credited year

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System	Common provisions and terms	
	Working Retiree Limitations	Retirement Benefits - Form of Payment
PERS-DBRP	<p>(1) Pre-7/1/2011 and < 65 years of age * \$1 reduced for \$1 earned over 960 hours</p> <p>(2) > 65 years of age and less than 70 1/2 retiree \$1 reduced for \$1 earned in excess of: * 960 hour limit above; or * sum of benefit + PERS earnings that exceeds HAC adjusted for inflation.</p>	<ul style="list-style-type: none"> • Option 1, single life annuity, balance to beneficiary • Option 2, 100% joint and survivor benefit • Option 3, 50% joint and survivor benefit • Option 4, a life annuity with period certain. <p>Within 18 months of the death of or divorce from the contingent annuitant (CA), retiree can choose Option 1 or select new CA and/or a different option.</p> <p>* Trusts, estates, and charitable organizations as beneficiaries can only receive a lump-sum payment.</p>
JRS	N/A	
HPORS	<p>Return on or after 7/1/2017:</p> <p>(1) < 480 hours in a calendar year:</p> <ul style="list-style-type: none"> • \$1 reduced for each \$3 > \$5 thousand in year. <p>(2) 480 or more hours in a calendar year:</p> <ul style="list-style-type: none"> • become active member of the system; • retirement benefit stops. <p>* Employer and state contributions are paid on working retirees.</p>	* Life annuity, 100% continuation to surviving spouse or dependent children.
GWPORS		<ul style="list-style-type: none"> • Option 1, single life annuity, balance to beneficiary • Option 2, 100% joint and survivor benefit • Option 3, 50% joint and survivor benefit • Option 4, a life annuity with period certain.
SRS		<p>Within 18 months of the death of or divorce from the contingent annuitant (CA), retiree can choose Option 1 or select new CA and/or a different option.</p> <p>* Trusts, estates, and charitable organizations as beneficiaries can only receive a lump-sum payment.</p>
MPORS		* Life annuity, 100% continuation to surviving spouse or dependent children.
FURS		* Life annuity, 100% continuation to surviving spouse or dependent children.
VFCA	N/A	N/A

Continued on next page

FINANCIAL SECTION

System	Working Retiree Limitations	Retirement Benefits - Form of Payment
HPORS DROP	N/A	<p>During DROP employment:</p> <ul style="list-style-type: none"> * Monthly DROP accruals, including GABA for MPORS only; plus * interest at assumed rate of return. <p>Post DROP employment:</p> <ul style="list-style-type: none"> * no retirement or DROP payment; * DROP account accrues interest. <p>Termination of Post DROP employment:</p> <ul style="list-style-type: none"> * retirement benefit; * Additional benefit based on member's service credit and HAC after DROP; * DROP benefit.
MPORS DROP	N/A	

System	Common provisions and terms	
	Service Credit	Membership Service
PERS-DBRP	<p>* Service credit determines benefit.</p> <p>* 1 month of service credit = 160 compensated hours. This includes certain transferred and purchased service.</p> <p>* Eligible active members may purchase 1 for 5 service credit.</p>	<p>* Membership service determines vesting and benefits.</p> <p>* 1 month of membership service = any month member contributions are reported.</p> <p>* Eligible member may purchase membership service.</p>
JRS		
HPORS		
SRS		
GWPORS		
MPORS		
FURS		
VFCA	<p>1 year of credit for service:</p> <ul style="list-style-type: none"> • serve with same fire company entire fiscal year, and • minimum 30 hours training. <p>* Fractional years are not credited.</p>	N/A

FINANCIAL SECTION

System	Common provisions and terms	
	Compensation	Withdrawal of member contributions
PERS-DBRP	Compensation generally means: * all remuneration paid; * excluding certain allowances, benefits, and lump sum payments; * specifically defined in law and differs amongst the systems. * 7/1/2013 - Bonuses paid are not compensation or pensionable.	Upon termination, a member is eligible to: * forfeit right to monthly benefit. * withdraw member contributions + interest. * rollover >\$200 refunds within 90 days.
JRS		
HPORS		
SRS		
GWPORS		
MPORS		
FURS		
VFCA	N/A	N/A

System	Common provisions and terms	
	Contributions	Member contributions interest credited
PERS-DBRP	* Member contributions are made through an "employer pickup" pretax arrangement.	* Interest is credited to member accounts at the rates determined by the Board. * The fiscal year 2019 interest rate credited to member accounts was 2.02%.
JRS		
HPORS		
SRS		
GWPORS		
MPORS		
FURS		
PERS-DCRP Disability OPEB	* Member contributions: None * Employer contributions: 0.30% of member compensation	
VFCA	N/A	N/A

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System	Early Retirement Benefit	Second Retirement Benefit
PERS-DBRP	<p>Actuarially reduced:</p> <ul style="list-style-type: none"> * Pre-7/01/2011: <ul style="list-style-type: none"> • 5 years membership service, age 50 or • 25 years membership service, any age * 7/01/2011: <ul style="list-style-type: none"> • 5 years membership service, age 55 	<p><u>Requires returning to PERS-covered employment:</u></p> <p>Retire before 1/01/2016</p> <p>< 2 years additional service credit:</p> <ul style="list-style-type: none"> * refunded member contributions plus interest; * no service credit; * same benefit previously paid to the member; and * GABA immediately in January. <p>At least 2 years additional service credit:</p> <ul style="list-style-type: none"> * recalculated retirement benefit based on provisions in effect at second retirement; and * GABA on the recalculated benefit in January after receipt of new benefit for 12 months. <p>Retire on or after 1/01/2016:</p> <p>< 5 years additional service credit</p> <ul style="list-style-type: none"> * refunded member contributions plus interest; * no service credit; * same benefit previously paid to the member; and * GABA immediately in January. <p>At least 5 years of additional service credit:</p> <ul style="list-style-type: none"> * same retirement benefit prior to the return; * second retirement benefit for post return to based on rehired date laws in effect; and * GABA starts on both benefits in January after receipt for 12 months.
JRS	N/A	N/A
MPORS	<ul style="list-style-type: none"> * 5 years membership service, age 50 	<p>MPORS Initial Second Retirement: Age 50, re-employed in a MPORS position.</p> <p>Return prior to 7/01/2017:</p> <ul style="list-style-type: none"> * < 20 years of membership service: <ul style="list-style-type: none"> • repay benefits; and • new benefit based on total service. * > 20 years of membership service: <ul style="list-style-type: none"> • receives initial benefit; and • new retirement benefit based on new service credit and FAC.

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FINANCIAL SECTION

System	Early Retirement Benefit	Second Retirement Benefit
HPORS	Actuarially reduced from age 60: * Pre-7/01/2013 - 5 years of membership service * 7/01/2013 - 10 years of membership service	Return on or after July 1, 2017: * > 480 hours in a calendar year and < 5 years service credit: <ul style="list-style-type: none"> • no service credit; • refunded member contributions; • same retirement benefit previously paid, and • GABA immediately in January. * > 480 hours in a calendar year and at least 5 years of service credit: <ul style="list-style-type: none"> • is awarded service credit for period of reemployment; • same retirement benefit previously paid; • a second retirement benefit for post return calculated based on rehired date laws in effect; • GABA starts on the initial benefit in January and second one 12 months later. * No eligibility for a disability benefit.
SRS	Actuarially reduced from age 60 or 20 years of membership service: * 5 years membership service, age 50	
GWPORS	* 5 years of membership service, age 55	
MPORS	* 5 years membership service, age 50	
FURS	* 5 years of membership service, age 50	
VFCA	N/A	N/A

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System	Post Retirement Benefit Increases		
	Guaranteed Annual Benefit Adjustment (GABA)	GABA Waiting Period	Minimum Benefit Adjustment
PERS-DBRP	<ul style="list-style-type: none"> • Pre-7/01/2007 - 3.0% • 7/01/2007 through 6/30/2013 - 1.5% • 7/01/2013 - <ul style="list-style-type: none"> (a) 1.5% for each year if PERS is funded at or above 90%; (b) 1.5% is reduced by 0.1% for each 2% PERS is funded below 90%; and, (c) 0% whenever the amortization period for PERS is 40 years or more. 	1 year	N/A
JRS	7/01/1997 or elected GABA - 3%	1 year	Pre-7/01/1997 and did not elect GABA: Benefits increase same as salary of sitting judge.
HPORS	7/01/1997 or elected GABA - 3.0% 7/01/2013 - 1.5%	Pre-7/01/2013 - 1 year 7/01/2013 - 3 years	Pre-7/01/1997 and did not elect GABA: 2% x service credits x base salary of probationary officer. Limited to 5.0% over current benefit and may not exceed 60% of base salary of probationary officer.
SRS	Pre-7/01/2007 - 3% 7/01/2007 - 1.5%	1 year	N/A
GWPORS	Pre-7/01/2007 - 3.0% 7/01/2007 - 1.5%	1 year	N/A
MPORS	7/01/1997 or elected GABA - 3.0%	1 year	Pre-7/01/1997 and did not elect GABA - 1/2 of monthly salary of new officer
FURS	7/01/1997 or elected GABA - 3.0%	1 year	Pre-7/01/1997 and did not elect GABA - 1/2 of monthly salary of new firefighter
VFCA	N/A	N/A	N/A

FINANCIAL SECTION

System	Disability	Survivor
	Eligibility & Benefit Formula	Eligibility & Benefit Formula
PERS-DBRP	<p>* 5 years of membership service</p> <p>Pre-2/24/1991 and did not make a contrary election - Greater of:</p> <ul style="list-style-type: none"> • (90% of 1.785% of HAC) x service credit, or • 25% of HAC <p>2/24/1991 to 7/01/2011 -</p> <ul style="list-style-type: none"> • < 25 years membership service: 1.758% of HAC x service credit, or • At least 25 years membership service: 2% of HAC x service credit <p>7/01/2011 -</p> <ul style="list-style-type: none"> • < 10 years membership service: 1.5% of HAC x years of service credit • Between 10 and 30 years membership service: 1.785% of HAC x service credit • > 30 years membership service: 2% of HAC x service credit 	<p>Vested member's status at time of death:</p> <ul style="list-style-type: none"> • active; • receiving disability benefit for less than six months; • continuously disabled without receiving a disability benefit; or • inactive. <p>Hired prior to 7/01/2011 -</p> <p>Age 50 or 25 years membership service</p> <ul style="list-style-type: none"> • actuarial equivalent of accrued benefit at death; or, <p>< Age 50 and < 25 years membership service</p> <ul style="list-style-type: none"> • actuarial equivalent of the accrued early benefit paid at age 50. <p>Hired on or after 7/01/2011 -</p> <p>Age 55</p> <ul style="list-style-type: none"> • actuarial equivalent of accrued benefit at death; or <p>< Age 55</p> <ul style="list-style-type: none"> • actuarial equivalent of accrued early benefit paid at age 55.
PERS-DCRP Disability OPEB	<p>* Any age 5 years of membership service</p> <p>Hired prior to 7/1/2011, or hired prior to 2/24/1991 -</p> <ul style="list-style-type: none"> • < 25 years membership service: 1.785% of HAC x service credit, or • Least 25 years of membership service: 2% of HAC x service credit; and • Benefit payable to later of age 65 or for five years. <p>Hired on or after July 1, 2011 -</p> <ul style="list-style-type: none"> • Between 5 and 10 years membership service: 1.5% of HAC x years of service credit; • Between 10 and 30 years membership service: 1.785% of HAC x years service credit; • 30 or more years membership service: 2% of HAC x years of service credit; • Benefit payable to age 70 for disabilities occurring prior to age 65, or < five years for disabilities occurring after age 65. • No distributions from individual defined contribution account while being paid from the PERS-DCRP Disability OPEB. • Participants may choose to receive a distribution from their individual account instead of applying for and receiving a disability benefit. 	<p>Survivor's benefit: Disability benefits cease after death of a member, and their beneficiary is entitled to the member's vested defined contribution account balance.</p> <p>Form of payment:</p> <ul style="list-style-type: none"> • Normal form of payment is an annuity. • No other forms of payment are available

	Disability	Survivor
System	Eligibility & Benefit Formula	Eligibility & Benefit Formula
JRS	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Any amount of membership service Greater of 50% of salary or 50% of HAC <p>Non-duty-related disability:</p> <ul style="list-style-type: none"> 5 years membership service Actuarial equivalent of normal retirement at disability 	<p>Duty-related death:</p> <ul style="list-style-type: none"> service retirement benefit on date of death. <p>Non-duty-related death:</p> <ul style="list-style-type: none"> vested member; refund of member's contributions, or actuarial equivalent of service retirement at death. Retired members without contingent annuitant, payment made to member's designated beneficiary = accumulated contributions reduced by any retirement benefits already paid.
HPORS	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Any active member < 20 years membership service: 50% of HAC, or > 20 years membership service: 2.6% of HAC x years of service credit <p>Regular disability:</p> <ul style="list-style-type: none"> Any vested member Actuarial equivalent of service retirement benefit at age 60. 	<p>Duty-related deaths:</p> <ul style="list-style-type: none"> active member; 50% HAC to spouse or dependent child. <p>Non-duty-related death:</p> <ul style="list-style-type: none"> active or inactive member; actuarial equivalent of early retirement benefit to spouse or dependent child. * Retired members without spouse or dependent child, payment made to member's designated beneficiary will be = accumulated contributions reduced by any retirement benefits already paid.
HPORS DROP	N/A	<p>Death Before the End of DROP Period:</p> <ul style="list-style-type: none"> * DROP and regular benefit to spouse or dependent child. * If no surviving spouse or dependent children, member's designated beneficiary receives balance of member's retirement account and a lump-sum payment of the member's DROP Benefit.

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FINANCIAL SECTION

System	Disability	Survivor
	Eligibility & Benefit Formula	Eligibility & Benefit Formula
SRS	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Any active member with any membership service < 20 years membership service: 50% of HAC, or > 20 years membership service: 2.5% of HAC x years of service credit <p>Non-duty-related disability:</p> <ul style="list-style-type: none"> Any vested member with 5 years membership service Actuarial equivalent of the normal retirement benefit at disability. 	<p>Duty-related death:</p> <ul style="list-style-type: none"> any active member lump-sum payment of member contributions; or benefit to the designated beneficiary that is greater of: <ul style="list-style-type: none"> 50% of HAC; or > 20 years = 2.5% x HAC x service credit <p>Non-duty-related death:</p> <ul style="list-style-type: none"> any member lump-sum refund of member contributions; or benefit = 2.5% of HAC x service credit; actuarially reduced from age 60 or 20 years membership service, whichever provides the greater benefit. <p>• Retired members without contingent annuitant, payment made to designated beneficiary = accumulated contributions reduced by any retirement benefits already paid.</p>
GWPORS	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Vested active member < 20 years of membership service 50% of HAC; or > 20 years of membership service: 2.5% of HAC x years of service credit <p>Regular disability:</p> <ul style="list-style-type: none"> vested member actuarial equivalent of normal retirement benefit disability. 	<p>Duty-related death:</p> <ul style="list-style-type: none"> * active member * benefit to designated beneficiary < 25 years membership service: 50% of HAC, or > 25 years membership service: 2.5% x HAC x service credit <p>Non-duty-related death:</p> <ul style="list-style-type: none"> any member lump-sum refund of member contributions; or actuarial equivalent of service benefit at death. <p>• Effective July 1, 2017, beneficiaries of GWPORS members who die prior to retirement are eligible for either a lump-sum benefit or a monthly survivor benefit. The monthly survivor benefit may be paid out as an option 1, 2, 3, or 4, at the survivor's discretion. Previously, statute provided for lump-sum payments only.</p>

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System	Disability	Survivor
	Eligibility & Benefit Formula	Eligibility & Benefit Formula
MPORS	<ul style="list-style-type: none"> Any active member < 20 years of membership service: 50 % of FAC > 20 years of membership service: 2.5% of FAC x years of service credit 	<ul style="list-style-type: none"> Any active member; benefit to spouse of dependent child: <ul style="list-style-type: none"> < 20 years of membership service: 50 % of FAC > 20 years of membership service: 2.5% of member's FAC x years of service credit In absence of a spouse or child, accumulated contributions minus any benefits already paid will be paid to member's designated beneficiary.
MPORS DROP	<ul style="list-style-type: none"> If a member becomes disabled during DROP Period, member will not be eligible for MPORS disability benefits. 	<p>Death Before the End of DROP Period:</p> <ul style="list-style-type: none"> DROP and regular benefit to spouse or dependent child. In absence of surviving spouse or dependent children, then member's designated beneficiary receives balance of member's retirement account and a lump-sum payment of the member's DROP Benefit.
FURS	<ul style="list-style-type: none"> Any active member The greater of: <ul style="list-style-type: none"> 50% of HAC, or 2.5% of HAC x years of service credit 	<ul style="list-style-type: none"> Any active or inactive member; benefit to spouse or dependent child: <ul style="list-style-type: none"> < 20 years of membership service <ul style="list-style-type: none"> 50% of HAC. > 20 years of membership service retirement benefit at date of death.
VFCA	<p>Duty-related disability:</p> <ul style="list-style-type: none"> Any current member on a fire company's roster Monthly benefit greater of: <ul style="list-style-type: none"> \$87.50 per month, or (\$8.75 per month x years of credited service up to 20 years) + (\$7.50 per month x years of credit service from 21 years up to 30 years) Post 7/01/2011, actuarially sound, and 30 years or more: <ul style="list-style-type: none"> Additional \$7.50 per month per year 	<ul style="list-style-type: none"> 10 years credited service or a retired member Benefit to surviving spouse or dependent child for total of 40 months includes payments to retired member prior to death.

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FINANCIAL SECTION

GASB STATEMENT No. 67 REPORTING

The membership data, method and assumptions used in calculations of the actuarially determined contributions, and plan provisions are the same as were described in the June 30, 2018 Actuarial Valuation Report for all defined benefit plans.

The discount rate as of June 30, 2019 is 7.65% which is the assumed long-term expected rate of return on the PERB's investments. Projections of the fiduciary net position have indicated that it is expected to be sufficient to make projected benefit payments for current members.

Changes in the discount rate affect the measurement of the TPL. At June 30, 2019, the sensitivity of the NPL to the changes in discount rate in all defined benefit plans are as follows.

PERS-DBRP As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 8,906,487,399	\$ 7,993,617,002	\$ 7,226,465,016
Fiduciary Net Position	5,903,306,304	5,903,306,304	5,903,306,304
Net Pension Liability	\$ 3,003,181,095	\$ 2,090,310,698	\$ 1,323,158,712
Fiduciary Net Position as a % of the TPL	66.28%	73.85%	81.69%

JRS As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 71,644,073	\$ 65,318,710	\$ 59,857,852
Fiduciary Net Position	104,885,637	104,885,637	104,885,637
Net Pension Asset	\$ (33,241,564)	\$ (39,566,927)	\$ (45,027,785)
Fiduciary Net Position as a % of the TPL	146.40%	160.58%	175.22%

HPORS As of June 30, 2019	1% Decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 270,309,456	\$ 237,727,489	\$ 211,391,353
Fiduciary Net Position	152,777,627	152,777,627	152,777,627
Net Pension Liability	117,531,829	\$ 84,949,862	\$ 58,613,726
Fiduciary Net Position as a % of the TPL	56.52%	64.27%	72.27%

SRS As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 525,188,056	\$ 460,620,635	\$ 407,694,951
Fiduciary Net Position	377,222,848	377,222,848	377,222,848
Net Pension Liability	\$ 147,965,208	\$ 83,397,787	\$ 30,472,103
Fiduciary Net Position as a % of the TPL	71.83%	81.89%	92.53%

GWPORS As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 283,961,188	\$ 247,012,363	\$ 216,836,063
Fiduciary Net Position	206,346,965	206,346,965	206,346,965
Net Pension Liability	\$ 77,614,223	\$ 40,665,398	\$ 10,489,098
Fiduciary Net Position as a % of the TPL	72.67%	83.54%	95.16%

MPORS As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 732,406,259	\$ 638,822,111	\$ 563,908,681
Fiduciary Net Position	439,777,930	439,777,930	439,777,930
Net Pension Liability	\$ 292,628,329	\$ 199,044,181	\$ 124,130,751
Fiduciary Net Position as a % of the TPL	60.05%	68.84%	77.99%

FURS As of June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 661,539,434	\$ 575,903,035	\$ 506,853,614
Fiduciary Net Position	461,189,143	461,189,143	461,189,143
Net Pension Liability	\$ 200,350,291	\$ 114,713,892	\$ 45,664,471
Fiduciary Net Position as a % of the TPL	69.71%	80.08%	90.99%

VFCA At June 30, 2019	1% decrease 6.65%	Discount Rate 7.65%	1% Increase 8.65%
Total Pension Liability	\$ 51,299,085	\$ 46,772,688	\$ 42,935,225
Fiduciary Net Position	39,866,038	39,866,038	39,866,038
Net Pension Liability	\$ 11,433,047	\$ 6,906,650	\$ 3,069,187
Fiduciary Net Position as a % of the TPL	77.71%	85.23%	92.85%

During the measurement year there were no changes in benefits for all plans.

ACTUARIAL STATUS OF THE PLANS

The Montana Constitution, Article VIII, Section 15, states that public retirement systems shall be funded on an actuarially sound basis. To maintain a fund on an actuarially sound basis, the statutory funding rate is tested in the valuation to determine if it is sufficient to cover the Normal Cost Rate plus an amortization payment of the Unfunded Actuarial Liability, if any, over no more than 30 years. As of June 30, 2019 and June 30, 2018:

Fiscal Year	Amortization in years		Funded Ratio	
	2019	2018	2019	2018
PERS-DBRP	36	38	74.19%	73.81%
JRS	0	0	161.23%	161.29%
HPORS	42	40	64.55%	64.03%
SRS	21	21	81.56%	81.04%
GWPORS	53	72	84.24%	82.95%
MPORS	18	20	69.23%	67.69%
FURS	9	10	79.97%	78.27%
VFCA	5	5	84.76%	82.76%

- As of June 30, 2019, the statutory contribution rates for the **PERS-DBRP**, **HPORS**, and **GWPORS** are not sufficient to amortize the unfunded actuarial liability within 30 years.
- As of June 30, 2019, the **JRS** amortizes in 0 years, meaning it is fully funded.
- As of June 30, 2019, the most recent actuarial valuation, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability for the **DCRP Disability OPEB**. The **DCRP Disability OPEB** assets gained 6.77% on an annualized market value basis during the year ended June 30, 2019. This return was above the assumed rate of return of 3.50%, resulting in an investment gain of about \$151,842. The actuarial value of assets is set equal to the market value of assets. The **DCRP Disability OPEB** unfunded actuarial liability was a gain of \$0.24 million and the funded ratio was 104.93%. Compared to the June 30, 2018 actuarial valuation, the Plan's unfunded actuarial liability was a gain of \$0.10 million, and the funded ratio was 102.32%.
- The actuarial contribution increased to \$899,555 at the June 30, 2019 **VFCA** valuation from \$823,290 at the June 30, 2018 valuation. The actuarial contribution is determined as the normal cost, administrative expense, and a 20-year open amortization of the unfunded actuarial liability.

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DEFINED CONTRIBUTION RETIREMENT PLANS

PLAN DESCRIPTIONS

Public Employees' Retirement System-DCRP (PERS-DCRP)

The PERS-Defined Contribution Retirement Plan (DCRP) is a multiple-employer plan established July 1, 2002 and governed by Title 19, chapters 2 & 3, MCA. This plan is available to eligible employees of the State, Montana University System, local governments, and school districts. All new PERS members are initially members of the PERS-DBRP and have a 12-month window during which they may choose to transfer to the PERS-DCRP or remain in the PERS-DBRP by filing an irrevocable election. If an election is not filed, the member remains in the PERS-DBRP. Members may not be members of both the defined contribution and defined benefit retirement plans. The PERS-DCRP provides retirement, disability, and death benefits to plan members and their beneficiaries.

DCRP Education Fund: The DCRP Education Fund (DCEd), as governed by section 19-3-112, MCA, was established to provide funding for the required education programs for members who have joined the PERS-DCRP. The DCEd was funded by 0.04% of the employers' contributions in fiscal year 2019.

DCRP Disability Fund: The DCRP Disability Fund (DC Disability), as governed by section 19-3-2141 MCA, provides disability benefits to eligible members who elect the PERS-DCRP. The DCRP Disability Fund received 0.3% of the employers' contribution in fiscal year 2019. The DC Disability OPEB is reported on the financial statements under the column heading *PERS-DCRP Disability OPEB*.

Plan Membership Elections: The financial statements reflect employer and employee contribution transfers of DCRP participants that filed elections at or near the June 30 cutoff date. The contributions will not be moved until early fiscal year 2020. At fiscal year end June 30, 2019, there were ongoing transfers of \$627.3 thousand.

Deferred Compensation Plan (457(b))

The Deferred Compensation (457(b)) Plan is a voluntary supplemental retirement savings plan established in 1974. The Deferred Compensation Plan is governed by Title 19, chapter 50, MCA, in accordance with Internal Revenue Code (IRC) §457. This plan is available to all employees of the State, Montana University System, and contracting political subdivisions.

Assets of the Deferred Compensation Plan are required to be held in trusts, custodial accounts or insurance company contracts for the exclusive benefit of participants and their beneficiaries. Empower™ Retirement is the recordkeeper for the plan. Participants elect to defer a portion of their salary, within IRC limits, into the Plan. Distribution of deferred salary is not allowed to employees until separation from service, retirement, or death. Unforeseen hardship distributions may be allowed while a participant is still employed, provided IRS-specified criteria are met.

MEMBERSHIP AND EMPLOYERS

Plan Membership as of Fiscal Year End June 30, 2019		
Type of Plan for Reporting Purposes as of Fiscal Year End June 30, 2019	Multi-Employer Defined Contribution	
Plan Designation	PERS-DCRP	Deferred Compensation (457)
Classification of Member		
Active	2,871	4,922
Inactive: entitled to, but not yet receiving benefits or a refund:		
Vested	559	4,618
Non-Vested	713	
Inactive members and beneficiaries currently receiving benefits:		
Service Retirements	111	
Disability Retirements	10	
Survivor benefits	2	
Total Membership	4,266	9,540

Participating Defined Contribution Employers				
Employer Type	PERS-DCRP		Deferred Compensation (457)	
As of Fiscal Year End June 30,	2019	2018	2019	2018
State Agencies*	31	32	1	1
Counties	51	53	6	4
Cities and Towns	57	58	14	14
Colleges and Universities	5	5	5	5
School Districts	122	117	15	15
High Schools	5	4		
Other Agencies	49	47	13	15
Total	320	316	54	54

* The State Agencies count as one employer for the 457 plan. The State of Montana includes 33 agencies; however, due to the nature of the reporting for the 457 plan we are unable to specifically determine which agencies have participating employees.

PERS-DCRP Active Membership by Employer Type		
Employer Type	June 30, 2019	June 30, 2018
State Agencies	1,397	1,296
Counties	439	416
Cities	334	320
Universities	156	143
High Schools	5	5
School Districts	332	301
Other Agencies	208	209
Total	2,871	2,690

CONTRIBUTIONS

Public Employees' Retirement System-DCRP (PERS-DCRP)

Assets of the PERS-DCRP are required to be held in trusts, custodial accounts or insurance company contracts for the exclusive benefit of participants and their beneficiaries. Empower™ Retirement is the recordkeeper for the plan.

Member and employer contribution rates are established by state law and may be amended only by the Legislature. (Reference Schedule of Contribution Rates on page 69).

Member contributions are deducted from each member's salary and remitted by participating employers. The entire amount of the member's contribution is credited to the individual account and maintained by the record keeper.

The 7.9% member contributions will be decreased to 6.9% on January 1 following actuary valuation results for the PERS-DBRP that show the amortization period has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and additional member contribution rates. There is no reduction to the member contributions on January 1, 2020.

The total **employer contribution** rate of 8.67% is allocated as follows: 8.33% to the member's retirement account, 0.04% to the defined contribution education fund, 0.3% to the long term disability plan.

Employer contributions temporarily increased 1.0%, effective July 1, 2013. Further, employer contributions increase an additional 0.1% a year over 10 years beginning July 1, 2014, through 2024. The employer additional contributions, including the 0.27% added in 2007 and 2009, terminate on January 1 following actuary valuation results that show the amortization period of the PERS-DBRP has dropped below 25 years and would remain below 25 years following the reduction of both the additional employer and member contribution rates. Based on the June 30, 2019 actuarial valuation, the additional contributions will not be terminated on January 1, 2020.

Deferred Compensation (457(b)) Plan

The **Deferred Compensation (457(b)) Plan** is a voluntary retirement plan designed to supplement retirement savings. Participants designate the amount to contribute within IRC limitations; either pre-tax deferral or designated Roth contribution. Most employers do not contribute to this plan on behalf of their employees.

DEFINED CONTRIBUTION AND DEFERRED COMPENSATION

SUMMARY OF BENEFITS

	PERS-DCRP	Deferred Compensation
Eligibility for benefit	<ul style="list-style-type: none"> Termination of Service 	<ul style="list-style-type: none"> Not available to participant until separation from service, retirement, or death. Unforeseen hardship distributions may be allowed while a participant is still employed, provided IRS-specified criteria are met.
Vesting	<ul style="list-style-type: none"> Immediate for participant's contributions and attributable income; 5 years of membership service for the employer's contributions to individual accounts and attributable income. 	<ul style="list-style-type: none"> Participant's are fully vested in their accounts immediately.
Benefit	<ul style="list-style-type: none"> Depends upon eligibility and individual account balance; Various payout options are available, including: <ul style="list-style-type: none"> taxable lump sums, periodic payments per participant direction; and IRS-permitted rollovers. 	<ul style="list-style-type: none"> Lump sum or periodic benefit payment, at the option of the participant. Based on individual account balances and plan provisions. IRS permitted rollovers are also possible.

INVESTMENTS

Among the offered investment options, the participants of the:

- PERS-DCRP** direct their contributions and their portion of employer's contributions.
- Deferred Compensation Plan** direct their deferred salary.

Participants may invest in any or all of the offered options and transfer between options on a daily basis, if desired. The investment options offered are selected by the PERB in compliance with the **PERS-DCRP** or **Deferred Compensation** Investment Policy Statements, the advice of an independent investment consultant, and assistance from the statutorily-created Employee Investment Advisory Council.

The offered investment options fall into two primary types: (1) the variable investment options and (2) the fixed investment option.

Variable investments: The variable investment options include a variety of Large, Mid and Small Cap mutual funds, as well as a fixed income bond fund and Target Date Retirement Funds. Options range from conservative to aggressive. The mutual funds cover all standard asset classes and categories.

FINANCIAL SECTION

PERS-DCRP Investment Options as of June 30, 2019	Deferred Compensation (457) Plan Investment Options as of June 30, 2019
International Stock Funds <ul style="list-style-type: none"> American Funds New Perspective R6 Oakmark International I Vanguard Total International Stock Index Adm Oppenheimer Developing Markets Y 	International Stock Funds <ul style="list-style-type: none"> Vanguard Total Intl Stock Index - Adm Artisan International Inv Franklin Mutual Global Discovery Z Dodge & Cox International Stock American Funds New Perspective R6 Oppenheimer Developing Markets Y
Small Company Stock Funds <ul style="list-style-type: none"> Vanguard Small Cap Growth Index Instl Vanguard Small Cap Index Signal Instl PGIM QMA Small-Cap Value Z 	Small Company Stock Funds <ul style="list-style-type: none"> Vanguard Small Cap Growth Index Instl Vanguard Small Cap Index Instl Neuberger Berman Genesis-Trust
Mid-Sized Company Stock Funds <ul style="list-style-type: none"> Janus Henderson Enterprise - N MFS Mid-Cap Value Vanguard Mid-Cap Index - Adm 	Mid Cap Company Stock Funds <ul style="list-style-type: none"> Janus Henderson Enterprise - N MFS Mid Cap Value R6 Vanguard Mid Cap Index Adm
Large Company Stock Funds <ul style="list-style-type: none"> Alger Capital Appreciation Z Black Rock Equity Index - Collective F Vanguard Equity Income - Adm JP Morgan US Equity R5 	Large Cap Stock Funds <ul style="list-style-type: none"> Vanguard Equity Income Adm Fidelity Contrafund Vanguard Institutional Index I Parnassus Core Equity Inst
Balanced Funds <ul style="list-style-type: none"> Vanguard Balanced Index - I 	Balanced Funds <ul style="list-style-type: none"> Vanguard Balanced Index I
Bond Funds <ul style="list-style-type: none"> PGIM Total Return Bond R6 Neuberger Berman High Income Bond - I Vanguard Total Bond Market Index - Adm 	Bond Funds <ul style="list-style-type: none"> Vanguard Total Bond Market Index - Adm Neuberger Berman High Income Bond Inv PGIM Total Return Bond R6
Target Date Funds <ul style="list-style-type: none"> T. Rowe Price Retirement - Balanced and 2005 through 2055 	Target Date Funds <ul style="list-style-type: none"> T. Rowe Price Retirement - Balanced and 2005 through 2055
Fixed Investment Options <ul style="list-style-type: none"> Montana Fixed Fund 	Fixed Investment Options <ul style="list-style-type: none"> Montana Fixed Fund

In addition to the investments listed, **Deferred Compensation** plan participants previously had the option to direct a portion of their deferrals to a term life insurance policy provided through Allianz Life Insurance. The ability to invest in life insurance is allowed under the IRC and was offered to plan participants prior to life insurance being offered as a standard component of health insurance benefit packages. This investment option has been discontinued; however, plan participants who had previously elected this option may continue.

Fixed Investment: Montana Fixed Fund. The Montana Fixed Fund is a stable value investment option, administered and managed by outside vendors:

- Pacific Investment Management Company LLC (PIMCO), Stable Value Manager;
- State Street Bank and Trust Company (State Street), Custodial Bank; and
- Third-party synthetic Guaranteed Interest Contract (GIC) providers
 - Transamerica Premier Life Insurance Company (Transamerica),
 - The Prudential Insurance Company of America (Prudential), and
 - Voya Retirement Insurance and Annuity Company (Voya).

When participants invest in the Montana Fixed Fund option, they are guaranteed a fixed rate of return, which is adjusted in accordance with the terms of the respective GIC provider contracts. The Montana Fixed Fund employs a synthetic stable value strategy where the stable value manager, PIMCO, manages a diversified bond portfolio and third party insurers, Transamerica, Prudential, and Voya, guarantee the participants' principal investments and earnings in accordance with the respective contracts with the GIC providers. The third party insurers set a fixed quarterly rate of return based on the stable value manager's portfolio yield, duration, market value and the contracts provide assurance that future credited income will not be below zero.

All money invested in the Montana Fixed Fund from the **PERS-DCRP** and **Deferred Compensation Plan** are held in a Pooled Trust. The Pooled Trust qualifies as a group trust under sections 401(a), including section 401(a)(24) and 501(a), of the IRC of 1986, as amended. The Pooled Trust assets are invested by PIMCO and are held under a custodial agreement with State Street. The Pooled Trust assets are invested by PIMCO based on an investment guideline schedule described in the Montana Fixed Fund investment policy established by the PERB. Additional investment constraints are contained in the investment management agreement between PIMCO and the PERB, and in the respective contracts issued by the Pooled Trust by each GIC provider.

Administrative expenses and revenues: Expenses for the **PERS-DCRP** and **Deferred Compensation Plan** can generally be classified as 1) administrative, including miscellaneous or 2) investment management. Following is a summary of revenues and expenses.

Administrative funding: The PERB charges **PERS-DCRP** and **Deferred Compensation** participants an administrative fee on participants' account balances to fund each plans expenses. On a quarterly basis, the recordkeeper withholds the fee from each plan participant's account. Empower™ Retirement withholds a portion of the fee collected from the participant to pay their recordkeeping fee and submits the remainder to the PERB. The PERB records this as *Miscellaneous Revenue* for each plan in the financial statements.

Recordkeeping fees: The recordkeeper, Empower™ Retirement, charges a set fee to the PERB for all **PERS-DCRP** and **Deferred Compensation** plan participants. These amounts are recorded as *Miscellaneous Expense* in the financial statements.

Montana Fixed Fund fees: The Montana Fixed Fund's crediting rate is declared net of expenses. Fees on the fund are charged by each of the five providers, PIMCO, State Street, Transamerica, Prudential, and Voya. The fees are defined under each contract for specific services. The fees charged by PIMCO and State Street for the externally managed fixed investments are classified as *Investment Expense*. The fees charged by Transamerica, Prudential and Voya are classified as *Miscellaneous Expense*.

Mutual funds/variable investments fees: The variable investments have investment management fees and some may have additional administrative fees. These fees are not presented in the financial statements. Mutual fund earnings are declared net of expenses, both investment management and administrative expenses, in accordance with the Securities and Exchange

FINANCIAL SECTION

Commission and other regulatory authorities. Current reporting standards for mutual fund companies do not require costs be made available in the detailed cost reports.

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FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2019

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
PERS-DBRP			
Total pension liability			
Service cost (Beginning of year)	\$ 123,618,712	\$ 132,567,233	\$ 144,475,909
Interest (includes interest on service cost)	585,204,569	552,036,737	507,380,846
Changes of benefit terms			
Differences between expected and actual experience	(147,536,263)	170,344,495	55,782,342
Changes of assumptions			354,960,213
Benefit payments ²	(422,444,896)	(395,338,673)	(366,354,719)
Refunds of Contributions ³	(12,360,997)	(12,619,498)	(12,252,007)
Net change in total pension liability	\$ 126,481,125	\$ 446,990,294	\$ 683,992,584
Total pension liability-beginning	7,867,135,877	7,420,145,583	6,736,152,999
Total pension liability-ending (a)	\$ 7,993,617,002	\$ 7,867,135,877	\$ 7,420,145,583
Plan fiduciary net position			
Contributions - employer ^{4, 9}	\$ 107,257,974	\$ 106,650,985	\$ 103,537,059
Contributions - non-employer	34,641,994	34,659,174	28,757,463
Contributions - member ⁵	101,713,235	102,075,271	100,768,139
Net investment income ⁶	320,879,899	478,690,356	591,434,954
Benefit payments ²	(422,444,896)	(395,338,673)	(366,354,719)
Administrative expense	(3,806,945)	(4,168,771)	(4,472,084)
Refunds of Contributions ³	(12,360,997)	(12,619,498)	(12,252,007)
Other ⁷	(2,567,968)	(2,474,018)	(1,706,733)
Net change in plan fiduciary net position	\$ 123,312,296	\$ 307,474,826	\$ 439,712,072
Plan fiduciary net position - beginning	5,779,994,008	5,472,519,182	5,032,807,110
Beginning of Year Adjustment			
Plan fiduciary net position - ending (b) ^{6, 9}	\$ 5,903,306,304	\$ 5,779,994,008	\$ 5,472,519,182
Net pension liability / (asset) - ending (a-b)	\$ 2,090,310,698	\$ 2,087,141,869	\$ 1,947,626,401
SRS			
Total pension liability			
Service cost (Beginning of year)	\$ 12,249,276	\$ 11,484,473	\$ 19,186,527
Interest (includes interest on service cost)	32,403,605	30,388,560	27,621,242
Changes of benefit terms			(1,494,604)
Differences between expected and actual experience	2,866,788	4,714,268	(170,781)
Changes of assumptions ⁸			(94,881,687)
Benefit payments ²	(19,512,312)	(18,052,544)	(16,700,117)
Refunds of Contributions ³	(1,438,814)	(1,490,014)	(1,383,061)
Net change in total pension liability	\$ 26,568,543	\$ 27,044,743	\$ (67,822,481)
Total pension liability-beginning	434,052,092	407,007,349	474,829,830
Total pension liability-ending (a)	\$ 460,620,635	\$ 434,052,092	\$ 407,007,349
Plan fiduciary net position			
Contributions - employer ⁴	\$ 10,572,559	\$ 10,366,141	\$ 7,562,105
Contributions - non-employer			
Contributions - member ⁵	8,615,935	8,469,282	7,188,857
Net investment income ⁶	20,396,435	29,157,838	35,511,246
Benefit payments ²	(19,512,312)	(18,052,544)	(16,700,117)
Administrative expense	(246,523)	(432,091)	(387,378)
Refunds of Contributions ³	(1,438,814)	(1,490,014)	(1,383,061)
Other ⁷	(44,792)	(48,421)	(33,489)
Net change in plan fiduciary net position	\$ 18,342,488	\$ 27,970,191	\$ 31,758,163
Plan fiduciary net position - beginning	358,880,360	330,910,169	299,152,006
Plan fiduciary net position - ending (b) ⁶	\$ 377,222,848	\$ 358,880,360	\$ 330,910,169
Net pension liability / (asset) - ending (a-b)	\$ 83,397,787	\$ 75,171,732	\$ 76,097,180

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² For fiscal year 2016 forward, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015 the benefit payments include refunds of contribution and transfers.

³ For fiscal year 2016 forward, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers.

⁴ The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.

⁵ The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶ The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the financial statements due to late entries from Board of Investments.

⁷ Other consists of the expense for Other Post Employment Benefits (OPEB). For PERS it also includes Refunds to other plans, and Transfers to DCRP and MUS-RP.

⁸ The Changes in assumptions for SRS is the adjustment in the discount rate from 7.75% to 6.68% at June 30, 2015 and to 5.93% at June 30, 2016.

⁹ The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule and adjustments for OPEB made after fiscal year end close.

2016	2015	2014
\$ 132,620,813	\$ 138,049,956	\$ 137,452,701
486,830,869	476,777,225	456,406,491
12,254,313	(11,276,266)	
(344,103,875)	(333,401,463)	(307,741,308)
(10,379,388)		
\$ 277,222,732	\$ 270,149,452	\$ 286,117,884
6,458,930,267	6,188,780,815	5,902,662,931
\$ 6,736,152,999	\$ 6,458,930,267	\$ 6,188,780,815
\$ 102,327,838	\$ 100,175,856	\$ 95,820,397
30,800,371	34,466,719	34,561,721
97,342,719	95,424,031	92,160,048
101,199,856	225,106,692	732,253,062
(344,103,875)	(333,401,463)	(307,741,308)
(3,858,330)	(3,483,531)	(3,522,346)
(10,379,388)		
(1,580,302)		
\$ (28,251,111)	\$ 118,288,304	\$ 643,531,574
5,061,058,221	4,942,769,917	4,299,238,343
\$ 5,032,807,110	\$ 5,061,058,221	\$ 4,942,769,917
\$ 1,703,345,889	\$ 1,397,872,046	\$ 1,246,010,898
\$ 18,802,901	\$ 12,574,185	\$ 15,117,708
22,900,429	25,664,435	23,976,049
749,213	(194,994)	
56,788,521	43,058,238	(49,542,278)
(15,476,437)	(15,280,070)	(13,943,335)
(1,028,890)		
\$ 82,735,737	\$ 65,821,794	\$ (24,391,856)
392,094,093	326,272,299	350,664,155
\$ 474,829,830	\$ 392,094,093	\$ 326,272,299
\$ 7,316,674	\$ 6,902,448	\$ 6,689,311
6,982,217	6,623,175	6,447,179
6,063,591	13,041,786	41,789,437
(15,476,437)	(15,280,070)	(13,943,335)
(322,584)	(247,405)	(203,493)
(1,028,890)		
(77,778)		
\$ 3,456,793	\$ 11,039,934	\$ 40,779,099
295,695,213	284,655,279	243,876,180
\$ 299,152,006	\$ 295,695,213	\$ 284,655,279
\$ 175,677,824	\$ 96,398,880	\$ 41,617,020

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2019

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
GWPORS			
Total pension liability			
Service cost (Beginning of year)	8,004,271	\$ 8,097,630	\$ 8,624,297
Interest (includes interest on service cost)	17,617,514	16,018,113	14,268,596
Changes of benefit terms			
Differences between expected and actual experience	(4,728,366)	4,780,923	3,742,704
Changes of assumptions			5,877,594
Benefit payments ²	(7,349,795)	(6,522,921)	(5,809,910)
Refunds of Contributions ³	(1,000,919)	(1,105,281)	(1,035,917)
Net change in total pension liability	\$ 12,542,705	\$ 21,268,464	\$ 25,667,364
Total pension liability / (asset) - beginning	234,469,658	213,201,194	187,533,830
Total pension liability / (asset) - ending (a)	\$ 247,012,363	\$ 234,469,658	\$ 213,201,194
Plan fiduciary net position			
Contributions - employer ⁴	\$ 4,686,260	\$ 4,613,066	\$ 4,463,631
Contributions - non-employer			
Contributions - member ⁵	5,565,627	5,512,148	5,278,141
Net investment income ⁶	11,124,693	15,573,117	18,589,670
Benefit payments ²	(7,349,795)	(6,522,921)	(5,809,910)
Administrative expense	(202,040)	(369,184)	(328,699)
Refunds of Contributions ³	(1,000,919)	(1,105,281)	(1,035,917)
Other ⁷	611	(19,293)	(549)
Net change in plan fiduciary net position	\$ 12,824,437	\$ 17,681,652	\$ 21,156,367
Plan fiduciary net position - beginning	193,522,528	175,840,876	154,684,509
Plan fiduciary net position - ending (b)	\$ 206,346,965	\$ 193,522,528	\$ 175,840,876
Net pension liability / (asset) - ending (a-b)	\$ 40,665,398	\$ 40,947,130	\$ 37,360,318
MPORS			
Total pension liability			
Service cost (Beginning of year)	\$ 12,020,270	\$ 12,248,910	\$ 12,267,430
Interest (includes interest on service cost)	43,960,204	41,949,138	39,632,065
Changes of benefit terms			
Differences between expected and actual experience	23,127,175	640,064	(5,057,920)
Changes of assumptions			16,011,685
Benefit payments ²	(26,220,684)	(24,566,646)	(23,474,602)
Refunds of Contributions ³	(3,636,764)	(2,675,247)	(1,043,487)
Net change in total pension liability	\$ 49,250,201	\$ 27,596,219	\$ 38,335,171
Total pension liability / (asset) - beginning	589,571,910	561,975,691	523,640,520
Total pension liability / (asset) - ending (a)	\$ 638,822,111	\$ 589,571,910	\$ 561,975,691
Plan fiduciary net position			
Contributions - employer ⁴	\$ 7,853,234	\$ 7,757,950	\$ 7,091,246
Contributions - non-employer	15,990,599	15,840,158	13,960,572
Contributions - member ⁵	5,037,799	5,046,352	4,465,630
Net investment income ⁶	22,635,730	33,237,702	39,775,778
Benefit payments ²	(26,220,684)	(24,566,646)	(23,474,602)
Administrative expense	(189,981)	(350,328)	(339,344)
Refunds of Contributions ³	(3,636,764)	(2,675,247)	(1,043,487)
Other ⁷	(6,299)	(37,861)	(491)
Net change in plan fiduciary net position	\$ 21,463,634	\$ 34,252,080	\$ 40,435,302
Plan fiduciary net position - beginning	418,314,296	384,062,216	343,626,914
Plan fiduciary net position - ending (b)⁶	\$ 439,777,930	\$ 418,314,296	\$ 384,062,216
Net pension liability / (asset) - ending (a-b)	\$ 199,044,181	\$ 171,257,614	\$ 177,913,475

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contributions and transfers.

³ For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and transfers.

⁴ The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.

⁵ The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶ The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the FY17 financial statements due to late entries from Board of Investments.

⁷ Other consists of the expense for Other Post Employment Benefits (OPEB)

2016	2015	2014
\$ 8,403,076	\$ 8,008,155	\$ 7,849,828
12,910,129	12,398,209	11,258,354
2,705,238	730,818	
(5,068,318)	(5,351,847)	(5,229,489)
(1,065,541)		
<u>\$ 17,884,584</u>	<u>\$ 15,785,335</u>	<u>\$ 13,878,693</u>
169,649,246	153,863,911	139,985,218
<u>\$ 187,533,830</u>	<u>\$ 169,649,246</u>	<u>\$ 153,863,911</u>
\$ 4,278,385	\$ 4,088,117	\$ 3,762,217
5,035,648	4,924,265	4,461,889
3,166,704	6,434,871	20,069,398
(5,068,318)	(5,351,847)	(5,229,489)
(269,496)	(200,745)	(161,663)
(1,065,541)		
(30,640)		
<u>\$ 6,046,742</u>	<u>\$ 9,894,661</u>	<u>\$ 22,902,352</u>
148,637,767	138,743,106	115,840,754
<u>\$ 154,684,509</u>	<u>\$ 148,637,767</u>	<u>\$ 138,743,106</u>
<u>\$ 32,849,321</u>	<u>\$ 21,011,479</u>	<u>\$ 15,120,805</u>
\$ 12,022,841	\$ 12,083,166	\$ 11,794,994
37,887,975	36,830,426	35,011,854
(3,546,948)	(2,014,310)	
(21,960,690)	(22,743,995)	(20,527,874)
(1,240,208)		
<u>\$ 23,162,970</u>	<u>\$ 24,155,287</u>	<u>\$ 26,278,974</u>
500,477,550	476,322,263	450,043,289
<u>\$ 523,640,520</u>	<u>\$ 500,477,550</u>	<u>\$ 476,322,263</u>
\$ 6,927,587	\$ 6,629,915	\$ 6,459,488
13,751,561	13,432,838	13,048,938
4,384,573	4,291,826	4,133,021
7,112,851	14,471,898	45,230,427
(21,960,690)	(22,743,995)	(20,527,874)
(273,951)	(212,017)	(166,807)
(1,240,208)		
(131,634)		
<u>\$ 8,570,089</u>	<u>\$ 15,870,465</u>	<u>\$ 48,177,193</u>
335,056,825	319,186,360	271,009,167
<u>\$ 343,626,914</u>	<u>\$ 335,056,825</u>	<u>\$ 319,186,360</u>
<u>\$ 180,013,606</u>	<u>\$ 165,420,725</u>	<u>\$ 157,135,903</u>

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Multiple-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2019

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
FURS			
Total pension liability			
Service cost (Beginning of year)	\$ 12,421,310	\$ 11,819,193	\$ 12,162,734
Interest (includes interest on service cost)	41,022,969	37,983,963	35,230,726
Changes of benefit terms			
Differences between expected and actual experience	(931,198)	14,798,655	893,628
Changes of assumptions			16,915,553
Benefit payments ²	(25,626,191)	(23,863,193)	(22,335,636)
Refunds of Contributions ³	(89,824)	(173,278)	(168,422)
Net change in total pension liability	\$ 26,797,066	\$ 40,565,340	\$ 42,698,583
Total pension liability / (asset) - beginning	549,105,969	508,540,629	465,842,046
Total pension liability / (asset) - ending (a)	\$ 575,903,035	\$ 549,105,969	\$ 508,540,629
Plan fiduciary net position			
Contributions - employer ⁴	\$ 7,323,532	\$ 7,053,165	\$ 6,499,776
Contributions - non-employer	16,566,861	16,127,433	14,438,412
Contributions - member ⁵	5,527,363	5,314,833	4,925,425
Net investment income ⁶	23,722,343	34,284,721	40,838,569
Benefit payments ²	(25,626,191)	(23,863,193)	(22,335,636)
Administrative expense	(170,851)	(329,234)	(320,213)
Refunds of Contributions ³	(89,824)	(173,278)	(168,422)
Other ⁷	1,405	13,978	(485)
Net change in plan fiduciary net position	\$ 27,254,638	\$ 38,428,425	\$ 43,877,426
Plan fiduciary net position - beginning	433,934,505	395,506,080	351,628,654
Plan fiduciary net position - ending (b)⁶	\$ 461,189,143	\$ 433,934,505	\$ 395,506,080
Net pension liability / (asset) - ending (a-b)	\$ 114,713,892	\$ 115,171,464	\$ 113,034,549
VFCA			
Total pension liability			
Service cost (Beginning of year)	\$ 112,527	\$ 92,294	\$ 267,843
Interest (includes interest on service cost)	3,434,677	3,461,285	3,336,579
Changes of benefit terms			
Differences between expected and actual experience	(173,854)	(930,963)	(791,792)
Changes of assumptions			2,281,533
Benefit payments ²	(2,996,808)	(2,944,046)	(2,858,443)
Refunds of Contributions ³			
Net change in total pension liability	\$ 376,542	\$ (321,430)	\$ 2,235,720
Total pension liability / (asset) - beginning	46,396,146	46,717,576	44,481,856
Total pension liability / (asset) - ending (a)	\$ 46,772,688	\$ 46,396,146	\$ 46,717,576
Plan fiduciary net position			
Contributions - employer ⁴			
Contributions - non-employer	\$ 2,370,454	\$ 2,212,113	\$ 2,064,561
Contributions - member ⁵			
Net investment income ⁶	2,070,508	3,126,746	3,836,835
Benefit payments ²	(2,996,808)	(2,944,046)	(2,858,443)
Administrative expense	(296,866)	(293,142)	(288,897)
Refunds of Contributions ³			
Other ⁷	(10,875)	(2,478)	(6,897)
Net change in plan fiduciary net position	\$ 1,136,413	\$ 2,099,193	\$ 2,747,159
Plan fiduciary net position - beginning	38,729,625	36,630,432	33,883,273
Plan fiduciary net position - ending (b)⁶	\$ 39,866,038	\$ 38,729,625	\$ 36,630,432
Net pension liability / (asset) - ending (a-b)	\$ 6,906,650	\$ 7,666,521	\$ 10,087,144

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014 and 2015, the benefit payments include refunds of contribution and transfers.

³ For fiscal year 2016, the Refunds of Contributions includes Refunds and Distributions, Refunds to other plans and Transfers. Refunds are not applicable to VFCA.

⁴ The Contributions - employer consists of the Employer, Membership Fees, Reduction in Force Program, and Miscellaneous Revenue.

⁵ The Contributions - member consists of the Plan Member and Interest Reserve Buyback.

⁶ The fiscal year 2017 Net Investment Income and Plan Fiduciary Net Position - ending are different in this schedule from what is presented in the FY17 financial statements due to late entries from Board of Investments.

⁷ Other consists of the expense for Other Post Employment Benefits (OPEB).

2016	2015	2014
\$ 11,519,465	\$ 11,066,391	\$ 10,608,895
33,514,243	32,580,262	30,847,306
(1,162,342)	(159,885)	
(20,896,200)	(19,747,008)	(19,052,130)
(46,128)		
<u>\$ 22,929,038</u>	<u>\$ 23,739,760</u>	<u>\$ 22,404,071</u>
442,913,008	419,173,248	396,769,177
<u>\$ 465,842,046</u>	<u>\$ 442,913,008</u>	<u>\$ 419,173,248</u>
\$ 6,163,464	\$ 6,100,252	\$ 6,006,863
13,969,719	13,572,990	12,767,624
4,751,806	4,710,082	4,697,333
7,311,946	14,640,156	45,464,858
(20,896,200)	(19,747,008)	(19,052,130)
(259,560)	(197,110)	(153,622)
(46,128)		
(2,424)		
<u>\$ 10,992,623</u>	<u>\$ 19,079,362</u>	<u>\$ 49,730,926</u>
340,636,031	321,556,669	271,825,743
<u>\$ 351,628,654</u>	<u>\$ 340,636,031</u>	<u>\$ 321,556,669</u>
<u>\$ 114,213,392</u>	<u>\$ 102,276,977</u>	<u>\$ 97,616,579</u>
\$ 282,498	\$ 221,969	\$ 237,639
3,355,483	2,851,618	2,843,095
	6,173,245	
(1,141,179)	(618,854)	
(2,623,011)	(2,379,353)	(2,294,676)
<u>\$ (126,209)</u>	<u>\$ 6,248,625</u>	<u>\$ 786,058</u>
44,608,065	38,359,440	37,573,382
<u>\$ 44,481,856</u>	<u>\$ 44,608,065</u>	<u>\$ 38,359,440</u>
\$ 2,036,297	\$ 1,913,482	\$ 1,818,237
622,331	1,479,954	4,815,491
(2,623,011)	(2,379,353)	(2,294,676)
(241,726)	(180,466)	(136,079)
(14,436)		
<u>\$ (220,545)</u>	<u>\$ 833,617</u>	<u>\$ 4,202,973</u>
34,103,818	33,270,201	29,067,228
<u>\$ 33,883,273</u>	<u>\$ 34,103,818</u>	<u>\$ 33,270,201</u>
<u>\$ 10,598,583</u>	<u>\$ 10,504,247</u>	<u>\$ 5,089,239</u>

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Changes in Single-Employer Plans Net Pension Liability / (Asset)

as of June 30, 2019

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
JRS			
Total pension liability			
Service Cost - Beginning of year	\$ 1,771,629	\$ 1,664,039	\$ 1,628,290
Interest (includes interest on service cost)	4,457,587	4,502,928	4,043,662
Changes of benefit terms			
Differences between expected and actual experience	2,743,465	(2,900,423)	862,189
Changes of assumptions			3,864,700
Benefit payments ²	(3,846,157)	(3,872,322)	(3,554,335)
Net change in total pension liability	\$ 5,126,524	\$ (605,778)	\$ 6,844,506
Total pension liability / (asset) - beginning	60,192,186	60,797,964	53,953,458
Total pension liability / (asset) - ending (a)	\$ 65,318,710	\$ 60,192,186	\$ 60,797,964
Plan fiduciary net position			
Contributions - employee ⁹	\$ (281)	\$ 1,084,880	\$ 1,800,105
Contributions - non-employer			
Contributions - member ⁵	516,777	575,050	488,208
Net investment income ⁶	5,687,228	8,467,204	10,368,402
Benefit payments ²	(3,846,157)	(3,872,322)	(3,554,335)
Administrative expense	(122,618)	(264,496)	(253,789)
Other ³		6,737	(674)
Net change in plan fiduciary net position	\$ 2,234,949	\$ 5,997,053	\$ 8,847,917
Plan fiduciary net position - beginning	102,650,688	96,653,635	87,805,718
Plan fiduciary net position - ending (b) ⁸	\$ 104,885,637	\$ 102,650,688	\$ 96,653,635
Net pension liability / (asset) - ending (a-b)	\$ (39,566,927)	\$ (42,458,502)	\$ (35,855,671)
HPORS			
Total pension liability			
Service Cost - Beginning of year	\$ 3,453,066	\$ 3,643,015	\$ 3,664,857
Interest (includes interest on service cost)	16,926,240	16,293,615	15,121,088
Changes of benefit terms ⁴			
Differences between expected and actual experience	2,412,675	589,270	2,773,680
Changes of assumptions			7,892,479
Benefit payments ²	(12,062,607)	(11,545,732)	(11,036,794)
Refund of Contributions ⁵	(582,438)	(321,840)	(244,597)
Net change in total pension liability	\$ 10,146,936	\$ 8,658,328	\$ 18,170,713
Total pension liability / (asset) - beginning	227,580,553	218,922,225	200,751,512
Total pension liability / (asset) - ending (a)	\$ 237,727,489	\$ 227,580,553	\$ 218,922,225
Plan fiduciary net position			
Contributions - employee ⁶	\$ 5,844,909	\$ 5,858,493	\$ 5,782,258
Contributions - non-employer ⁶	233,139	250,150	262,884
Contributions - member ⁷	2,002,319	2,386,526	1,949,795
Net investment income ⁸	8,268,830	12,282,824	15,098,813
Benefit payments ²	(12,062,607)	(11,545,732)	(11,036,794)
Administrative expense	(127,400)	(256,309)	(248,124)
Refund of Contributions ⁵	(582,438)	(321,840)	(244,597)
Other ³	2,007	8,067	(466)
Net change in plan fiduciary net position	\$ 3,578,759	\$ 8,662,179	\$ 11,563,769
Plan fiduciary net position - beginning	149,198,868	140,536,689	128,972,920
Plan fiduciary net position - ending (b) ⁸	\$ 152,777,627	\$ 149,198,868	\$ 140,536,689
Net pension liability / (asset) - ending (a-b)	\$ 84,949,862	\$ 78,381,685	\$ 78,385,536

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² For fiscal year 2016, Benefit Payments are only benefit payments. In fiscal years 2014, 2015 and 2018, the benefit payments include refunds of contributions and transfers.

³ Other consists of the expense for Other Post Employment Benefits (OPEB).

⁴ For fiscal year 2015, the HPORS Changes of benefit terms was the addition of the DROP.

⁵ For fiscal year 2016, the Refunds of Contributions includes refunds of member contributions.

⁶ The fiscal year 2014 and 2015, HPORS employer and non-employer contribution differences are due to considering all non-employer contributions as employer.

⁷ The HPORS Contributions - member consists of Plan Member and Interest Reserve Buyback on the financial statements.

2016	2015	2014
\$ 1,578,705	\$ 1,652,926	\$ 1,593,854
3,986,420	3,933,947	3,824,389
(1,341,333)	(1,032,091)	
(3,416,023)	(3,040,988)	(3,022,512)
\$ 807,769	\$ 1,513,794	\$ 2,395,731
53,145,689	51,631,895	49,236,164
\$ 53,953,458	\$ 53,145,689	\$ 51,631,895
\$ 1,807,493	\$ 1,683,990	\$ 1,651,483
729,180	534,091	481,461
1,778,748	3,842,387	12,420,597
(3,416,023)	(3,040,988)	(3,022,512)
(197,445)	(135,815)	(100,567)
(2,742)		
\$ 699,211	\$ 2,883,665	\$ 11,430,462
87,106,507	84,222,842	72,792,380
\$ 87,805,718	\$ 87,106,507	\$ 84,222,842
\$ (33,852,260)	\$ (33,960,818)	\$ (32,590,947)
\$ 3,798,553	\$ 3,598,464	\$ 3,464,399
14,545,022	14,112,116	13,517,924
	1,855,618	
18,339	267,336	
(10,482,414)	(10,000,856)	(9,443,007)
(93,811)		
\$ 7,785,689	\$ 9,832,678	\$ 7,539,316
192,965,823	183,133,145	175,593,829
\$ 200,751,512	\$ 192,965,823	\$ 183,133,145
\$ 5,915,644	\$ 5,839,336	\$ 5,735,507
242,749		
1,917,487	1,624,327	1,458,042
2,605,256	5,738,373	18,678,284
(10,482,414)	(10,000,856)	(9,443,007)
(197,034)	(144,253)	(109,140)
(93,811)		
(2,276)		
\$ (94,399)	\$ 3,056,927	\$ 16,319,686
129,067,319	126,010,392	109,690,706
\$ 128,972,920	\$ 129,067,319	\$ 126,010,392
\$ 71,778,592	\$ 63,898,504	\$ 57,122,753

FINANCIAL SECTION

Public Employees' Retirement Board
A Component Unit of the State of Montana
Required Supplementary Information
Schedule of Net Pension Liability / (Asset) for Multiple-Employer Plans
as of June 30, 2019
 Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
PERS-DBRP			
Total Pension Liability	\$ 7,993,617,002	\$ 7,867,135,877	\$ 7,420,145,583
Plan Fiduciary Net Position ^{2,4}	5,903,306,304	5,779,994,008	5,472,519,182
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 2,090,310,698</u>	<u>\$ 2,087,141,869</u>	<u>\$ 1,947,626,401</u>
Plan fiduciary net position as a percentage of the total pension liability	73.85%	73.47%	73.75%
Covered Payroll ³	\$ 1,247,343,733	\$ 1,230,105,350	\$ 1,232,066,537
Net pension liability / (asset) as a percentage of covered payroll ²	167.58%	169.67%	158.08%
SRS			
Total Pension Liability	\$ 460,620,635	\$ 434,052,092	\$ 407,007,349
Plan Fiduciary Net Position ²	377,222,848	358,880,360	330,910,169
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 83,397,787</u>	<u>\$ 75,171,732</u>	<u>\$ 76,097,180</u>
Plan fiduciary net position as a percentage of the total pension liability	81.89%	82.68%	81.30%
Covered Payroll	\$ 80,461,048	\$ 77,587,294	\$ 74,581,258
Net pension liability / (asset) as a percentage of covered payroll	103.65%	96.89%	102.03%
GWPORS			
Total Pension Liability	\$ 247,012,363	\$ 234,469,658	\$ 213,201,194
Plan Fiduciary Net Position ²	206,346,965	193,522,528	175,840,876
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 40,665,398</u>	<u>\$ 40,947,130</u>	<u>\$ 37,360,318</u>
Plan fiduciary net position as a percentage of the total pension liability	83.54%	82.54%	82.48%
Covered Payroll	\$ 51,676,963	\$ 50,823,150	\$ 49,381,004
Net pension liability / (asset) as a percentage of covered payroll	78.69%	80.57%	75.66%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

³ The fiscal year 2014 covered payroll for PERS-DBRP has been re-stated due to the transfer of compensation from the PERS-DBRP to the PERS-DCRP. This also affected the dollar amount of the Actuarially Determined Contribution because it was determined as a percent of payroll.

⁴ The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule.

2016	2015	2014
\$ 6,736,152,999	\$ 6,458,930,267	\$ 6,188,780,815
5,032,807,110	5,061,058,221	4,942,769,917
<u>\$ 1,703,345,889</u>	<u>\$ 1,397,872,046</u>	<u>\$ 1,246,010,898</u>
74.71%	78.36%	79.87%
\$ 1,185,646,179	\$ 1,154,866,605	\$ 1,120,266,025
143.66%	121.04%	111.22%
<u>\$ 474,829,830</u>	<u>\$ 392,094,093</u>	<u>\$ 326,272,299</u>
299,152,006	295,695,213	284,655,279
<u>\$ 175,677,824</u>	<u>\$ 96,398,880</u>	<u>\$ 41,617,020</u>
63.00%	75.41%	87.24%
\$ 70,593,304	\$ 68,045,517	\$ 64,672,635
248.86%	141.67%	64.35%
<u>\$ 187,533,830</u>	<u>\$ 169,649,246</u>	<u>\$ 153,863,911</u>
154,684,509	148,637,767	138,743,106
<u>\$ 32,849,321</u>	<u>\$ 21,011,479</u>	<u>\$ 15,120,805</u>
82.48%	87.61%	90.17%
\$ 47,108,310	\$ 44,884,739	\$ 41,636,566
69.73%	46.81%	36.32%

FINANCIAL SECTION

Public Employees' Retirement Board
A Component Unit of the State of Montana
Required Supplementary Information
Schedule of Net Pension Liability / (Asset) for Multiple-Employer Plans
as of June 30, 2019
 Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
MPORS			
Total Pension Liability	\$ 638,822,111	\$ 589,571,910	\$ 561,975,691
Plan Fiduciary Net Position ²	439,777,930	418,314,296	384,062,216
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 199,044,181</u>	<u>\$ 171,257,614</u>	<u>\$ 177,913,475</u>
Plan fiduciary net position as a percentage of the total pension liability	68.84%	70.95%	68.34%
Covered Payroll	\$ 54,282,431	\$ 52,035,958	\$ 48,603,580
Net pension liability / (asset) as a percentage of covered payroll	366.68%	329.11%	366.05%
FURS			
Total Pension Liability	\$ 575,903,035	\$ 549,105,969	\$ 508,540,629
Plan Fiduciary Net Position ²	461,189,143	433,934,505	395,506,080
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 114,713,892</u>	<u>\$ 115,171,464</u>	<u>\$ 113,034,549</u>
Plan fiduciary net position as a percentage of the total pension liability	80.08%	79.03%	77.77%
Covered Payroll	\$ 50,756,445	\$ 47,934,517	\$ 45,208,091
Net pension liability / (asset) as a percentage of covered payroll	226.01%	240.27%	250.03%
VFCA			
Total Pension Liability	\$ 46,772,688	\$ 46,396,146	\$ 46,717,576
Plan Fiduciary Net Position ²	39,866,038	38,729,625	36,630,432
Multiple-Employers' Net Pension Liability / (Asset)	<u>\$ 6,906,650</u>	<u>\$ 7,666,521</u>	<u>\$ 10,087,144</u>
Plan fiduciary net position as a percentage of the total pension liability	85.23%	83.48%	78.41%
Covered Payroll	N/A	N/A	N/A
Net pension liability / (asset) as a percentage of covered payroll	N/A	N/A	N/A

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

2016	2015	2014
\$ 523,640,520	\$ 500,477,550	\$ 476,322,263
343,626,914	335,056,825	319,186,360
<u>\$ 180,013,606</u>	<u>\$ 165,420,725</u>	<u>\$ 157,135,903</u>
65.62%	66.95%	67.01%
\$ 47,233,801	\$ 45,736,127	\$ 44,426,617
381.11%	361.69%	353.70%
<u>\$ 465,842,046</u>	<u>\$ 442,913,008</u>	<u>\$ 419,173,248</u>
351,628,654	340,636,031	321,556,669
<u>\$ 114,213,392</u>	<u>\$ 102,276,977</u>	<u>\$ 97,616,579</u>
75.48%	76.91%	76.71%
\$ 43,118,925	\$ 41,627,233	\$ 39,891,869
264.88%	245.70%	244.70%
<u>\$ 44,481,856</u>	<u>\$ 44,608,065</u>	<u>\$ 38,359,440</u>
33,883,273	34,103,818	33,270,201
<u>\$ 10,598,583</u>	<u>\$ 10,504,247</u>	<u>\$ 5,089,239</u>
76.17%	76.45%	86.73%
N/A	N/A	N/A
<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Net Pension Liability / (Asset) for Single-Employer Plans

as of June 30, 2019

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
JRS			
Total Pension Liability	\$ 65,318,710	\$ 60,192,186	\$ 60,797,964
Plan Fiduciary Net Position ²	104,885,637	102,650,688	96,653,635
Single-Employers' Net Pension Liability / (Asset)	<u>\$ (39,566,927)</u>	<u>\$ (42,458,502)</u>	<u>\$ (35,855,671)</u>
Plan fiduciary net position as a percentage of the total pension liability	160.58 %	170.54%	158.98%
Covered Payroll	\$ 7,382,476	\$ 7,290,904	\$ 6,974,470
Net pension liability / (asset) as a percentage of covered payroll	(535.96)%	-582.35%	-514.10%
HPORS			
Total Pension Liability	\$ 237,727,489	\$ 227,580,553	\$ 218,922,225
Plan Fiduciary Net Position ²	152,777,627	149,198,868	140,536,689
Single-Employers' Net Pension Liability / (Asset)	<u>\$ 84,949,862</u>	<u>\$ 78,381,685</u>	<u>\$ 78,385,536</u>
Plan fiduciary net position as a percentage of the total pension liability	64.27 %	65.56%	64.19%
Covered Payroll	\$ 15,177,612	\$ 15,251,339	\$ 14,778,975
Net pension liability / (asset) as a percentage of covered payroll	559.71 %	513.93%	530.39%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² The fiscal year 2017 Plan Fiduciary Net Position is different in this schedule from what was presented in the FY17 Statement of Fiduciary Net Position due to late entries from Board of Investments.

2016	2015	2014
\$ 53,953,458	\$ 53,145,689	\$ 51,631,895
87,805,718	87,106,507	84,222,842
<u>\$ (33,852,260)</u>	<u>\$ (33,960,818)</u>	<u>\$ (32,590,947)</u>
162.74%	163.90%	163.12%
\$ 6,920,367	\$ 6,524,569	\$ 6,354,763
-489.17%	-520.51%	-512.86%
<hr/>		
\$ 200,751,512	\$ 192,965,823	\$ 183,133,145
128,972,920	129,067,319	126,010,392
<u>\$ 71,778,592</u>	<u>\$ 63,898,504</u>	<u>\$ 57,122,753</u>
64.25%	66.89%	68.81%
\$ 15,275,964	\$ 14,549,378	\$ 14,149,269
469.88%	439.18%	403.72%

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans

as of June 30, 2019

(in thousands)

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
PERS-DBRP			
Actuarially Determined Contribution	\$ 152,663	\$ 141,310	\$ 132,295
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions ^{2, 4}	107,258	106,651	103,537
Non-Employer Contributions (State)	34,642	34,659	28,758
Total Contributions	\$ 141,900	\$ 141,310	\$ 132,295
Contribution Deficiency / (Excess)	\$ 10,763	\$ 0	\$ 0
Covered Payroll ³	\$ 1,247,344	\$ 1,230,105	\$ 1,232,067
Contributions as a Percentage of Covered Payroll ³	11.38%	11.49%	10.74%
SRS			
Actuarially Determined Contribution	\$ 10,573	\$ 10,366	\$ 10,095
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions ²	10,573	10,366	7,562
Non-Employer Contributions (State)			
Total Contributions	\$ 10,573	\$ 10,366	\$ 7,562
Contribution Deficiency / (Excess)	\$ 0	\$ 0	\$ 2,533
Covered Payroll	\$ 80,461	\$ 77,587	\$ 74,581
Contributions as a Percentage of Covered Payroll	13.14%	13.36%	10.14%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

³ The fiscal year 2014 covered payroll of PERS-DBRP has been re-stated due to the transfer of compensation from the PERS-DBRP to the PERS-DCRP. This also affected the dollar amount of the Actuarially Determined Contribution (ADC) because it was determined as a percentage of payroll.

⁴ The PERS-DBRP amounts will not tie to the financial statements due to the exclusion of the PERS-DB Education (DB Ed) amount on this schedule.

2016	2015	2014
\$ 133,128	\$ 131,424	\$ 137,681
102,328	100,176	95,820
30,800	34,467	34,562
<u>\$ 133,128</u>	<u>\$ 134,643</u>	<u>\$ 130,382</u>
<u>\$ 0</u>	<u>\$ (3,219)</u>	<u>\$ 7,299</u>
\$ 1,185,646	\$ 1,154,867	\$ 1,120,266
11.23%	11.66%	11.64%
\$ 8,640	\$ 9,737	\$ 9,779
7,317	6,902	6,689
<u>\$ 7,317</u>	<u>\$ 6,902</u>	<u>\$ 6,689</u>
<u>\$ 1,323</u>	<u>\$ 2,835</u>	<u>\$ 3,090</u>
\$ 70,593	\$ 68,046	\$ 64,673
10.36%	10.14%	10.34%

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans

as of June 30, 2019

(in thousands)

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
GWPORS			
Actuarially Determined Contribution	\$ 5,285	\$ 5,213	\$ 5,495
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions ²	4,686	4,613	4,464
Non-Employer Contributions (State)			
Total Contributions	\$ 4,686	\$ 4,613	\$ 4,464
Contribution Deficiency / (Excess)	\$ 599	\$ 600	\$ 1,031
Covered Payroll	\$ 51,677	\$ 50,823	\$ 49,381
Contributions as a Percentage of Covered Payroll	9.07%	9.08%	9.04%
MPORS			
Actuarially Determined Contribution	\$ 23,844	\$ 23,598	\$ 21,052
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions ²	7,853	7,758	7,091
Non-Employer Contributions (State)	15,991	15,840	13,961
Total Contributions	\$ 23,844	\$ 23,598	\$ 21,052
Contribution Deficiency / (Excess)	\$ 0	\$ 0	\$ 0
Covered Payroll	\$ 54,282	\$ 52,036	\$ 48,604
Contributions as a Percentage of Covered Payroll	43.93%	45.35%	43.31%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

2016	2015	2014
\$ 4,707	\$ 5,256	\$ 4,976
4,278	4,088	3,762
<u>\$ 4,278</u>	<u>\$ 4,088</u>	<u>\$ 3,762</u>
<u>\$ 429</u>	<u>\$ 1,168</u>	<u>\$ 1,214</u>
\$ 47,108	\$ 44,885	\$ 41,637
9.08%	9.11%	9.04%
\$ 20,679	\$ 17,229	\$ 17,922
6,928	6,630	6,459
13,751	13,433	13,049
<u>\$ 20,679</u>	<u>\$ 20,063</u>	<u>\$ 19,508</u>
<u>\$ 0</u>	<u>\$ (2,834)</u>	<u>\$ (1,586)</u>
\$ 47,234	\$ 45,736	\$ 44,427
43.78%	43.87%	43.91%

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer and Non-Employer (State) Contributions for Cost-Sharing Multiple-Employer Plans

as of June 30, 2019

(in thousands)

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
FURS			
Actuarially Determined Contribution	\$ 23,890	\$ 23,181	\$ 20,938
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions ²	7,323	7,053	6,500
Non-Employer Contributions (State)	16,567	16,128	14,438
Total Contributions	\$ 23,890	\$ 23,181	\$ 20,938
Contribution Deficiency / (Excess)	\$ 0	\$ 0	\$ 0
Covered Payroll	\$ 50,756	\$ 47,935	\$ 45,208
Contributions as a Percentage of Covered Payroll	47.07%	48.36%	46.32%
VFCA			
Actuarially Determined Contribution	\$ 2,370	\$ 2,212	\$ 2,065
Actual Contributions in Relation to the Actuarially Determined Contribution			
Employer Contributions			
Non-Employer Contributions (State)	2,370	2,212	2,065
Total Contributions	\$ 2,370	\$ 2,212	\$ 2,065
Contribution Deficiency / (Excess)	\$ 0	\$ 0	\$ 0
Covered Payroll	N/A	N/A	N/A
Contributions as a Percentage of Covered Payroll	N/A	N/A	N/A

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

2016	2015	2014
\$ 20,133	\$ 13,279	\$ 13,699
6,163	6,100	6,007
13,970	13,573	12,767
<u>\$ 20,133</u>	<u>\$ 19,673</u>	<u>\$ 18,774</u>
<u>\$ 0</u>	<u>\$ (6,394)</u>	<u>\$ (5,075)</u>
\$ 43,119	\$ 41,627	\$ 39,892
46.69%	47.26%	47.06%
\$ 2,037	\$ 890	\$ 1,116
2,036	1,913	1,818
<u>\$ 2,036</u>	<u>\$ 1,913</u>	<u>\$ 1,818</u>
<u>\$ 1</u>	<u>\$ (1,023)</u>	<u>\$ (702)</u>
N/A	N/A	N/A
N/A	N/A	N/A

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Required Supplementary Information

The information presented in the GASB Statement No. 67 required supplementary schedules was determined as part of the actuarial valuations for accounting purposes at the dates indicated.

Valuation date: June 30, 2018

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC) for fiscal year end 2019:

Timing	ADC are determined on the valuation date payable in the fiscal year beginning immediately following the valuation date
Actuarial cost method	Entry age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Wage Inflation	3.50%
Inflation	2.75%
Salary increases	3.50%, including inflation
Investment rate of return	7.65%, net of pension plan investment expense, including inflation
Mortality (Healthy)	RP 2000 Combined Employee and Annuitant Mortality Table Projected to 2020 using Scale BB, set back one year for males.
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant Mortality Table with no projections.

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FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Employer Contributions

for Single-Employer Plans

as of June 30, 2019

(in thousands)

Last 10 Fiscal Years¹

Fiscal Year	2019	2018	2017
JRS²			
Actuarially Determined Contribution			
Actual Contributions in Relation to the Actuarially Determined Contribution:			
Employer Contributions ^{3, 5}		\$ 1,085	\$ 1,800
Total Contributions		\$ 1,085	\$ 1,800
Contribution Deficiency / (Excess)		\$ (1,085)	\$ (1,800)
Covered Payroll	\$ 7,382	\$ 7,291	\$ 6,974
Contributions as a Percentage of Covered Payroll	0.00%	14.88%	25.81%
HPORS²			
Actuarially Determined Contribution	\$ 6,668	\$ 6,530	\$ 6,045
Actual Contributions in Relation to the Actuarially Determined Contribution:			
Employer Contributions ^{3, 4}	6,078	\$ 6,109	\$ 6,045
Total Contributions	\$ 6,078	\$ 6,109	\$ 6,045
Contribution Deficiency / (Excess)	\$ 590	\$ 421	\$ —
Covered Payroll	\$ 15,178	\$ 15,251	\$ 14,779
Contributions as a Percentage of Covered Payroll	40.05%	40.05%	40.90%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² Notes to Schedule

Valuation date: June 30, 2018

Key Methods and Assumptions Used to Determine the Actuarially Determined Contribution (ADC) for fiscal year end 2019:

Timing	ADC is determined on the actuarial valuation date payable in the fiscal year beginning immediately following the valuation date
Actuarial cost method	Entry age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Wage Inflation	3.50%
Inflation	2.75%
Salary increases	3.50%, including inflation
Investment rate of return	7.65%, net of pension plan investment expense, including inflation
Mortality (Healthy)	RP-2000 Combined Employee and Annuitant Mortality Tables Projected to 2020 using Scale BB, set back one year for males
Mortality (Disabled)	RP-2000 Combined Employee and Annuitant Mortality Table

³ Employer consists of the Employer, Membership Fees, Reduction in Force Program and Miscellaneous Revenue.

⁴ For fiscal year 2014, the HPORS contributions for the supplemental benefit payment were classified as a non-employer contribution. It has been determined that the supplemental contribution should be classified as an employer contribution.

⁵ For FY2019, the JRS employer contributions were temporarily suspended due to the November 2017 Special Legislation Session, Senate Bill 1.

2016	2015	2014
<hr/>		
\$ 1,807	\$ 1,684	\$ 1,651
<u>\$ 1,807</u>	<u>\$ 1,684</u>	<u>\$ 1,651</u>
<u>\$ (1,807)</u>	<u>\$ (1,684)</u>	<u>\$ (1,651)</u>
\$ 6,920	\$ 6,525	\$ 6,355
26.11%	25.81%	25.98%
<hr/>		
\$ 6,158	\$ 5,706	\$ 6,121
\$ 6,158	\$ 5,839	\$ 5,736
<u>\$ 6,158</u>	<u>\$ 5,839</u>	<u>\$ 5,736</u>
<u>\$ —</u>	<u>\$ (133)</u>	<u>\$ 385</u>
\$ 15,276	\$ 14,549	\$ 14,149
40.31%	40.13%	40.54%
<hr/>		

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Investment Returns for Multiple-Employer Plans

as of June 30, 2019

Last 10 Fiscal Years¹

	Year Ended June 30	PERS-DBRP	SRS	GWPORS
Annual money-weighted rate of return, net investment expense				
	2019	5.64%	5.70%	5.73%
	2018	8.88%	8.83%	8.82%
	2017	11.94%	11.96%	11.97%
	2016	2.04%	2.05%	2.09%
	2015	4.60%	4.59%	4.59%
	2014	17.18%	17.15%	17.12%

	Year Ended June 30	MPORS	FURS	VFCA
Annual money-weighted rate of return, net investment expense				
	2019	5.56%	5.59%	5.59%
	2018	8.86%	8.85%	8.97%
	2017	11.92%	11.93%	11.89%
	2016	2.18%	2.19%	1.85%
	2015	4.66%	4.66%	4.63%
	2014	17.16%	17.15%	17.23%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Public Employees' Retirement Board*A Component Unit of the State of Montana***Required Supplementary Information****Schedule of Investment Returns for Single-Employer Plans***as of June 30, 2019*Last 10 Fiscal Years¹

	Year Ended June 30	JRS	HPORS
Annual money-weighted rate of return, net investment expense			
	2019	5.65%	5.64%
	2018	8.87%	8.89%
	2017	11.96%	11.92%
	2016	2.03%	2.02%
	2015	4.60%	4.61%
	2014	17.17%	17.19%

¹ This Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Required Supplementary Information

Schedule of Total OPEB (Healthcare) Liability and Related Ratios, Last Ten Fiscal Years¹

Fiscal Year	2019	2018
Total OPEB Liability		
Service cost	\$ 6,271	\$ 27,891
Interest	6,096	29,728
Changes of benefit terms		
Difference between expected and actual experience		(69,725)
Changes of assumptions or other inputs	8,460	(4,363)
Benefit payments	(5,220)	25,170
Net change in total OPEB liability	\$ 15,607	\$ 8,701
Total OPEB liability - Beginning	84,795	76,094
Total OPEB liability - Ending	\$ 100,402	\$ 84,795
Proportionate Share of Total OPEB Liability	0.18026%	0.16805%
Covered employee payroll	\$ 3,909,710	\$ 3,703,606
Total OPEB liability as a percentage of covered employee payroll	2.57%	2.29%

¹ Schedules are intended to present information for 10 years. Additional years will be displayed as they become available.

In accordance with GASB Statement No. 75, the above information is presented to reflect the funding progress of the Healthcare OPEB Plan for MPERA as a State of Montana employer and is determined by the State of Montana. No assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB Statement No. 75.

Factors that significantly affect trends in the amounts reported:

There were no changes in terms or methods that significantly affected the trends since the last measurement date.

At June 30, 2018, the most recent actuarial valuation available was performed by the State of Montana as of January 1, 2017 for the calendar year ending December 31, 2017. This actuarial valuation is performed every two years with the next valuation to be performed as of January 1, 2019 for the calendar year ending December 31, 2019. The State of Montana finances claims on a pay-as-you-go basis and does not advance fund the OPEB liability. This is the OPEB obligation for MPERA as a State of Montana employer and is determined by the State of Montana.

Public Employees' Retirement Board*A Component Unit of the State of Montana***Notes to Required Supplementary Information for OPEB (Healthcare)**

Actuarial valuation date	December 31, 2017
Actuarial measurement date ¹	March 31, 2019
Actuarial cost method	Entry age normal funding method
Amortization method	Open basis
Asset valuation method	Not applicable because no assets meeting the definition of plan assets under GASB 75

Actuarial assumptions:

Discount rate	3.79%
Projected payroll increases	4.00%
Participation:	
Future retirees	55.00%
Future eligible spouses	60.00%
Marital status at retirement	70.00%

¹ Update procedures were used to roll forward the total OPEB liability to the measurement date.

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Notes to the Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations for **funding** purposes at the dates indicated. Additional information as of latest actuarial valuation follows:

	PERS-DBRP	JRS	HPORS
Valuation date	June 30, 2019	June 30, 2019	June 30, 2019
Actuarial cost method	Entry Age	Entry Age	Entry Age
Amortization method	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open
Remaining amortization period in years:			
Unfunded Liability ¹	36		42
Unfunded Credit ²		0	
Asset valuation method	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market
Actuarial assumptions:			
Investment rate of return compounded annually (net of investment expense)	7.65%	7.65%	7.65%
Projected salary increases			
General Wage Growth*	3.50%	3.50%	3.50%
Merit	0% - 4.8%	None	0% - 6.3%
*Includes inflation at	2.75%	2.75%	2.75%
Administrative Expenses as a Percentage of Payroll ³	0.30%	0.08%	0.18%
Benefit Adjustments			
GABA	3% if hired prior to July 1, 2007; or 1.5% if hired between July 1, 2007 and June 30, 2013; or 0% to 1.5% if hired on or after July 1, 2013; after 1 year	3% after 1 yr	3% after 1 year or 1.5% after 3 years if hired on or after July 1, 2013
Non-GABA	N/A	Biennial increase to salary of active member in like position	2% per yr service, not to exceed 5% of current benefit, for probationary officer's base pay

¹ The unfunded actuarial liability in the PERS, HPORS and GWPORS do not amortize in 30 years.

² Assets are larger than the past service liability – creating an unfunded credit; the credit is amortized over future costs.

³ The administrative expenses are recognized by an additional amount added to the normal cost contribution rate for the System. This amount varies from year to year based on the prior year's actual administrative expenses.

SRS	GWPORS	MPORS	FURS	VFCA
June 30, 2019	June 30, 2019	June 30, 2019	June 30, 2019	June 30, 2019
Entry Age	Entry Age	Entry Age	Entry Age	Entry Age
Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open	Level percent of inflation, open
21	53	18	9	5
				Based on Current Revenue
4-Year smoothed market	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market	4-Year smoothed market
7.65%	7.65%	7.65%	7.65%	7.65%
3.50%	3.50%	3.50%	3.50%	N/A
0% - 6.3%	0% - 6.3%	0% - 6.6%	0% - 6.3%	N/A
2.75%	2.75%	2.75%	2.75%	N/A
0.16%	0.16%	0.15%	0.13%	\$201,971
3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% or 1.5% for new hires on or after July 1, 2007, after 1 year	3% after 1 yr	3% after 1 yr	N/A
N/A	N/A	50% newly confirmed officer	50% newly confirmed firefighter	N/A

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Administrative Expenses

Year Ended June 30, 2019

	Defined Benefit Plans	PERS-DBRP Education Fund	Defined Contribution PERS-DCRP	Deferred Compensation (457) Plan
Personal Services	\$ 1,928,154	\$ 491,244	\$ 278,298	\$ 132,345
Board Members' Per Diem	1,849		172	129
Employee Benefits	723,749	213,456	98,628	43,836
Total Personal Services	2,653,752	704,700	377,098	176,310
Other Services				
Consulting and Professional Services	942,547		104,513	114,685
Legal Fees and Court Costs	37,425		131	90
Audit Fees	48,756		2,977	2,233
Medical Services	4,334		181	
Records Storage	4,776		444	333
Computer Processing	171,137	6,274	17,902	13,058
Printing and Photocopy Charges	17,545	1,120	839	1,376
Warrant Writing Services	50,618		4,709	3,532
Other	204,063	6,287	19,917	14,326
Total Other Services	1,481,201	13,681	151,613	149,633
Communications				
Recruitment Costs				
Postage and Mailing	59,118	762	2,228	8,631
Telephone	38,516	9,693	5,023	2,825
Total Communications	97,634	10,455	7,251	11,456
Other Expenses				
Supplies and Materials	83,368	20,980	10,882	6,952
Travel	19,456	5,826	4,696	3,760
Rent	207,044	53,632	27,228	15,207
Repairs and Maintenance	344	68	43	25
Compensated Absences	(42,048)	(6,230)	(7,667)	(2,319)
OPEB Expenses	5,884	1,935	773	343
Miscellaneous	659,922	32,536	62,155	65,686
Total Other Expenses	933,970	108,747	98,110	89,654
Total Administrative Expenses	\$ 5,166,557	\$ 837,583	\$ 634,072	\$ 427,053

Public Employees' Retirement Board*A Component Unit of the State of Montana***Schedule of Investment Expenses****Year Ended June 30, 2019**

Plan	Investment Manager	Fees
PERS-DBRP	Board of Investments	\$ 36,002,624
PERS-DCRP	Board of Investments	7,435
DISABILITY OPEB		
JRS	Board of Investments	637,775
HPORS	Board of Investments	926,708
SRS	Board of Investments	2,267,168
GWPORS	Board of Investments	1,231,417
MPORS	Board of Investments	2,577,368
FURS	Board of Investments	2,689,133
VFCA	Board of Investments	234,330
DC	PIMCO	32,535
	State Street Bank	2,515
	Transamerica	10,961
	Prudential	10,698
	Voya	11,439
457	PIMCO	454,419
	State Street Bank	35,130
	Transamerica	153,114
	Prudential	149,611
	Voya	159,849
Total Investment Expense		\$ 47,594,229

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Professional/Consultant Fees

Year Ended June 30, 2019

Individual or Firm	Nature of Service	Amount Paid
Consultant Fees		
Ascension Electric Corporation	Electricians	\$ 122
Buck Global	Investment Consultants	98,000
Big Sky Plumbing & Heating	Heating Maintenance	100
Cavanaugh Macdonald Consulting	Actuarial Audit	262,687
Cheryl Romsa	Court Reporting	564
Government Finance Officers Assoc.	CAFR Review	1,095
Ice Miller, LLP	Tax Consultants	13,510
Lexis Nexis	Risk Data Management Services	360
Pension Benefit Informations, LLC	Death Validation Services	3,500
Public Pension Coordinating Council	Pension Standards Award	100
Risk Managment & Tort Division	Risk Management Services	1,721
Russell S Ring	Private Contracting	270
Sagitec Solutions Inc.	Pension Systems Design	727,701
SHI International Corp.	Software Contracted Services	52,015
Consultant Fees Subtotal		1,161,745
Other Professional Fees		
Dean Gregg, PHD	Medical Consultant	423
Department of Justice	Legal Services	6,716
Legislative Audit Division	Independent Auditors	53,966
Timothy D. Schofield, MD PLLC	Medical Consultant	4,092
Other Professional Fees Subtotal		65,197
Total Professional/Consultant Fees		\$ 1,226,942

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FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Fiduciary Net Position (PERS-DBRP and PERS-DBEd)

as of June 30, 2019

	PERS-DBRP	PERS-DBEd	TOTAL
Assets			
Cash and Short-term Investments	\$ 182,218,375	\$ 2,378,924	\$ 184,597,299
Securities Lending Collateral	27,173,882		27,173,882
Receivables			
Interest	363,761	4,749	368,510
Accounts Receivables	3,330,947	4,454	3,335,401
Due from Other Funds	605,258		605,258
Due from Primary Government			
Notes Receivable	12,762		12,762
Total Receivables	4,312,728	9,203	4,321,931
Investments, at fair value			
CAPP Participant Pool	5,716,675,412		5,716,675,412
Total Investments	5,716,675,412		5,716,675,412
Capital Assets			
Property and Equipment, at cost,			
net of Accumulated Depreciation	15,304	1,099	16,403
Intangible Assets at cost,			
net of amortization expense	1,214,386		1,214,386
Total Capital Assets	1,229,690	1,099	1,230,789
Total Assets	5,931,610,087	2,389,226	5,933,999,313
Deferred Outflow of Resources - OPEB	8,425	2,776	11,201
Liabilities			
Securities Lending Liability	27,173,882		27,173,882
Accounts Payable	370,093	39,284	409,377
Unearned Revenue	384,310	120	384,430
Due to Other Funds			
Compensated Absences	273,817	38,581	312,398
OPEB Implicit Rate Subsidy LT	65,759	21,556	87,315
Total Liabilities	28,267,861	99,541	28,367,402
Deferred Inflow of Resources - OPEB	44,403	14,533	58,936
Net Position Restricted for Pension Benefits	\$ 5,903,306,248	\$ 2,277,928	\$ 5,905,584,176

Public Employees' Retirement Board*A Component Unit of the State of Montana***Detail of Changes in Fiduciary Net Position (PERS-DBRP and PERS-DBEd)
for the Fiscal Year Ended June 30, 2019**

	PERS-DBRP	PERS-DBEd	TOTAL
Additions			
Contributions			
Employer	\$ 107,359,980	\$ 492,624	\$ 107,852,604
Plan Member	101,600,460		101,600,460
Interest Reserve Buyback	112,775		112,775
Retirement Incentive Program	1,221		1,221
Miscellaneous Revenue	(103,227)	18	(103,209)
State Contributions	1,026,994		1,026,994
State Appropriations	33,615,000		33,615,000
<i>Total Contributions</i>	243,613,203	492,642	244,105,845
Investment Income			
Net Appreciation (Depreciation)			
in Fair Value of Investments	352,531,699	139	352,531,838
Interest	3,626,682	58,140	3,684,822
Dividends			
Investment Expense	(36,002,624)		(36,002,624)
<i>Net Investment Income</i>	320,155,757	58,279	320,214,036
Securities Lending Income			
Securities Lending Income	1,453,616		1,453,616
Securities Lending Rebate and Fees	(729,473)		(729,473)
<i>Net Securities Lending Income</i>	724,143		724,143
Total Net Investment Income	320,879,900	58,279	320,938,179
Total Additions	564,493,103	550,921	565,044,024
Deductions			
Benefits	422,444,896		422,444,896
Refunds/Distributions	12,360,997		12,360,997
Refunds to Other Plans	407,696		407,696
Transfers to MUS-RP	232,194		232,194
Transfers to DCRP	1,968,902		1,968,902
OPEB Expenses	5,884	1,935	7,819
Administrative Expenses	3,804,394	835,648	4,640,042
Total Deductions	441,224,963	837,583	442,062,546
Net Increase (Decrease)	123,268,140	(286,662)	122,981,478
Net Position Restricted for Pension Benefits			
Beginning of Year	5,779,994,008	2,564,590	5,782,558,598
Prior Year Adjustments	44,101		44,101
End of Year	\$ 5,903,306,249	\$ 2,277,928	\$ 5,905,584,177

FINANCIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Detail of Fiduciary Net Position (PERS-DCRP, PERS-DCEd) as of June 30, 2019

	PERS-DCRP	PERS-DCEd	TOTAL
Assets			
Cash and Short-term Investments	\$ 2,262,198	\$ 166,395	\$ 2,428,593
Securities Lending Collateral			
Receivables			
Interest	2,794	328	3,122
Accounts Receivables	238,977	343	239,320
Due from Other Funds			
<i>Total Receivables</i>	241,771	671	242,442
Investments, at fair value			
Defined Contributions Fixed Investments	16,945,434		16,945,434
Defined Contributions Variable Investments	244,027,337		244,027,337
<i>Total Investments</i>	260,972,771		260,972,771
Property and Equipment, at cost, net of Accumulated Depreciation (Note A2)	1,892	157	2,049
Intangible Assets at cost, net of amortization expense	290,126		290,126
<i>Total Capital Assets</i>	292,018	157	292,175
Total Assets	263,768,758	167,223	263,935,981
Deferred Outflow of Resources - OPEB	799	291	1,090
Liabilities			
Securities Lending Liability			
Accounts Payable	662,424	4,309	666,733
Unearned Revenue	427	1	428
Compensated Absences	42,559	4,380	46,939
OPEB Implicit Rate Subsidy LT	6,533	2,309	8,842
<i>Total Liabilities</i>	711,943	10,999	722,942
Deferred Inflow of Resources - OPEB	4,469	1,567	6,036
Net Position Restricted for Pension Benefits	\$ 263,053,145	\$ 154,948	\$ 263,208,093

Public Employees' Retirement Board*A Component Unit of the State of Montana***Detail of Changes in Fiduciary Net Position (PERS-DCRP, PERS-DCEd)
for the Fiscal Year Ended June 30, 2019**

	PERS-DCRP	PERS-DCEd	TOTAL
Additions			
Contributions			
Employer	\$ 12,989,508	\$ 71,325	\$ 13,060,833
Plan Member	13,505,558		13,505,558
Miscellaneous Revenue	122,679	2	122,681
Nonvested Member Forfeitures	714,024		714,024
<i>Total Contributions</i>	27,331,769	71,327	27,403,096
Investment Income			
Net Appreciation (Depreciation) in Fair Value of Investments	6,705,553		6,705,553
Interest	11,320,743	3,968	11,324,711
Investment Expense	(68,148)		(68,148)
<i>Net Investment Income</i>	17,958,148	3,968	17,962,116
Securities Lending Income			
Securities Lending Income			
Securities Lending Rebate and Fees			
<i>Net Securities Lending Income</i>			
Total Net Investment Income	17,958,148	3,968	17,962,116
Total Additions	45,289,917	75,295	45,365,212
Deductions			
Distributions	9,022,446		9,022,446
OPEB Expenses	568	205	773
Administrative Expenses	542,811	90,488	633,299
Miscellaneous Expenses	284,100		284,100
Total Deductions	9,849,925	90,693	9,940,618
Net Increase (Decrease)	35,439,992	(15,398)	35,424,594
Net Position Restricted for Pension Benefits			
Beginning of Year	227,613,153	170,346	227,783,499
Prior Year Adjustments			
End of Year	\$ 263,053,145	\$ 154,948	\$ 263,208,093

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INVESTMENT SECTION

MONTANA BOARD OF INVESTMENTS

Department of Commerce

Street Address:
2401 Colonial Drive, 3rd Floor
Helena, MT 59601

Mailing Address :
PO Box 200126
Helena, MT 59620-0126



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Consolidate Asset Pension Plan Investment Letter

For the fiscal year ended June 30, 2019

Fiscal year 2019 saw net growth in the Consolidated Asset Pension Pool (CAPP) of 5.8% for the tenth consecutive year of positive returns. The since inception return performance for the Public Employee Retirement System (PERS) and Teachers Retirement System (TRS), by far the two largest systems, are 7.66% and 7.67% respectively. The net asset value (NAV) of CAPP grew by \$165.2 million over the fiscal year.

The asset allocation established by the Board of Investments is meant to facilitate accomplishing the investment objectives of the respective CAPP participants by minimizing losses and maximizing gains in line with the Board's fiduciary obligations. This asset mix ensures diversification to protect against losses but also ensures gains are to the benefit of pensioners. Leading asset classes for FY2019 were Private Equity (9.3%), Investment Grade Credit (8.7%), Real Estate (8.4%), and High Yield (7.2%). TIPS (4.8%), Broad Fixed Income (7.9%), US Treasury and Agency (6.3%), Mortgage- Backed Securities (6.8%), and Diversifying Strategies (3.9%) all posted positive returns for the year. International Equity (.8%), Cash (2.3%), and Natural Resources (3.8%) returns blunted overall gains but did ensure broad market exposure to ensure positive returns over the long-term. Domestic Equity, the largest asset class, had a 6.8% return despite significant market volatility beginning in the first and second quarter of FY2019.

Moving forward, the Board will have the opportunity to invest in longer duration assets which will carry an additional inherent premium. Investments in Real Estate, Private Equity, and Natural Resources may be a focus. Equities will remain the vast majority of the portfolio into the future, led by US Domestic Equities.

Returns may be challenged by prolonged international trade disputes, a global economic slowdown, and worldwide political uncertainty. Consumer spending will continue to buoy the US economy and changes in sentiment could pose risks to the economy and, thus, CAPP returns.

The Board will continue to examine its asset allocation, liquidity of individual pension plans, and economic conditions for opportunities to improve performance.

Respectfully submitted,

/s/ Dan Villa

DAN VILLA
Executive Director, Acting Chief Investment Officer
Montana Board of Investments

Public Employees' Retirement Board

A Component Unit of the State of Montana

Report on Investment Activity

Introduction

The Montana Constitution and various Montana statutes govern the investment activity of the retirement funds administered by the Public Employees' Retirement Board (PERB). The "prudent expert principle" contained in the Montana Constitution and Montana statute requires the fiduciaries of the funds, including the Montana Board of Investments (BOI), to discharge their duties in the same manner that a prudent expert acting in a fiduciary capacity with the same resources, familiar with like matters, and under the same circumstances, exercises in the conduct of an enterprise of a similar character with similar objectives.

The prudent expert principle permits diversification of the holdings of the fund to minimize the risk of loss and maximize the rate of return. The opportunity to diversify among various asset classes enables a fund to reduce volatility and increase returns.

The BOI prepares and provides for the PERB information related to the defined benefit plan investments, including the PERS-DCRP Disability OPEB Plan. The Montana Public Employee Retirement Administration (MPERA), staff of the PERB, is responsible for the presentation of the report of investment activity.

Investment Goals and Objectives

The goals influencing the investment activity for the PERB are two-fold. The first is to realize compounded rates of return sufficient to fund benefits as provided for in statute. The second is to provide services at the lowest possible cost to employers and members. The investment objective of BOI is the achievement of a total rate of return greater than the assumed actuarial return over the long term.

In addition, BOI seeks to outperform the appropriate market benchmarks for each asset class year to year and provide returns comparable to those attained by similar public fund peers.

To calculate the PERB's defined benefit plan investment returns, State Street Bank, BOI's custodial bank and an independent third party, uses the time-weighted total rate of return method.

Risk Tolerance

In view of the long-term horizon of the pension plans, subject to the need for sufficient liquidity to pay benefits, all funds have an above-average ability to assume risk.

Investment Management and Results

The funds of each defined benefit system are invested by BOI as part of the Unified Investment Program. The portfolio is broadly diversified between the various asset classes including, but not limited to, stocks, bonds, real estate, and private equity. A complete list of portfolio information is available through BOI. State Street Bank compiles the rates of return for the investments. The total

INVESTMENT SECTION

rates of return for fiscal year 2019 are reported by the BOI for each defined benefit fund. The following tables are a summary of the information received from the BOI.

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

12-Month Period ending June 30, 2019

Asset Class	<u>INDEX</u>	<u>PERS-DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		2.36%	2.36%	2.36%	2.36%
Libor 1 Month	2.27%				
Total Plan		5.70%	5.71%	5.72%	5.71%
Index Composite¹		5.61%	5.62%	5.62%	5.61%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		2.36%	2.36%	2.36%	2.36%
Libor 1 Month	2.27%				
Total Plan		5.72%	5.72%	5.72%	5.70%
Index Composite¹		5.62%	5.62%	5.62%	5.60%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans. Performance calculations were prepared using time-weighted rates of return and are reported net of all management fees and expenses, unless otherwise indicated.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Three-Year Period ending June 30, 2019

Asset Class	<u>INDEX</u>	<u>PERS-DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		1.56%	1.56%	1.56%	1.56%
Libor 1 Month	1.53%				
Total Plan		8.80%	8.81%	8.80%	8.80%
Index Composite¹		8.89%	8.90%	8.89%	8.89%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		1.56%	1.56%	1.56%	1.56%
Libor 1 Month	1.53%				
Total Plan		8.81%	8.80%	8.80%	8.80%
Index Composite¹		8.90%	8.88%	8.89%	8.88%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans. Performance calculations were prepared using time-weighted rates of return and are reported net of all management fees and expenses, unless otherwise indicated.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Five-Year Period ending June 30, 2019

Asset Class	<u>INDEX</u>	<u>PERS-DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		1.04%	1.04%	1.04%	1.04%
Libor 1 Month	1.02%				
Total Plan		6.57%	6.58%	6.58%	6.58%
Index Composite¹		6.90%	6.91%	6.90%	6.90%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		1.04%	1.04%	1.04%	1.04%
Libor 1 Month	1.02%				
Total Plan		6.58%	6.57%	6.57%	6.56%
Index Composite¹		6.91%	6.90%	6.90%	6.90%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans. Performance calculations were prepared using time-weighted rates of return and are reported net of all management fees and expenses, unless otherwise indicated.

INVESTMENT SECTION

TOTAL RATES OF ANNUALIZED RETURN BY ASSET CLASS

Ten-Year Period ending June 30, 2019

Asset Class	<u>INDEX</u>	<u>PERS-DBRP</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>
Cash Equivalents (STIP)		0.65%	0.65%	0.65%	0.65%
Libor 1 Month	0.62%				
Total Plan		9.87%	9.86%	9.88%	9.85%
Index Composite¹		0.00%	0.00%	0.00%	0.00%

	<u>INDEX</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>
Cash Equivalents (STIP)		0.65%	0.65%	0.65%	0.65%
Libor 1 Month	0.62%				
Total Plan		9.84%	9.86%	9.85%	9.83%
Index Composite¹		0.00%	0.00%	0.00%	0.00%

¹ From inception to 3/31/2017:

The portfolio weighted average of S&P 1500 Super Composite, MSCI ACWI ex US IMI Net, S&P 1500 + 4% Qtr Lag, LIBOR 1 Month, BBG BARC US Agg, and NCREIF ODCE 1 Qtr Lag (Net)

From 4/1/2017 to present:

Equity and Cash Equivalents weighted average of CAPP Custom Benchmark and LIBOR 1 Month (Daily)

The rates of return are provided by State Street Bank, the BOI's custodial bank for the plans. Performance calculations were prepared using time-weighted rates of return and are reported net of all management fees and expenses, unless otherwise indicated.

Asset Allocation

Asset allocation is the main determinant of investment returns, and will therefore impact the BOI's success in meeting long-term investment objectives. The asset allocation table on the next page represents a diversified mix of asset classes designed to meet the long-term return needs of the plans while balancing this objective with risk and liquidity considerations. The actual asset mix as of fiscal year end 2019 is listed in the table on the next page, along with the approved allocation ranges for the short term investment pool (STIP), the 12 underlying asset classes of the CAPP and CAPP STIP.

INVESTMENT SECTION

Fiscal Year 2019 ASSET ALLOCATION					
	Allocation Range	Actual Investment		Allocation Range	Actual Investment
PERS-DBRP			GWPORS		
STIP	1% to 4%	2.95%	STIP	1% to 4%	2.96%
Domestic Equity	24% to 38%	28.86%	Domestic Equity	24% to 38%	28.86%
International Equities	12% to 24%	17.25%	International Equities	12% to 24%	17.25%
Private Equity	9% to 15%	11.96%	Private Equity	9% to 15%	11.95%
Natural Resources	0% to 6%	2.91%	Natural Resources	0% to 6%	2.91%
Real Estate	4% to 12%	7.50%	Real Estate	4% to 12%	7.50%
TIPS	2% to 6%	4.29%	TIPS	2% to 6%	4.29%
Broad Fixed Income	0% to 3%	1.32%	Broad Fixed Income	0% to 3%	1.32%
US Treasury/Agency Fixed Income	6% to 15%	8.08%	US Treasury/Agency Fixed Income	6% to 15%	8.08%
Investment Grade Credit	2% to 6%	3.50%	Investment Grade Credit	2% to 6%	3.50%
Agency Mortgage-Backed Securities	2% to 8%	3.93%	Agency Mortgage-Backed Securities	2% to 8%	3.93%
High Yield	2% to 6%	3.11%	High Yield	2% to 6%	3.11%
Diversified Strategies	0% to 4%	1.38%	Diversified Strategies	0% to 4%	1.38%
Cash Equivalents (CAPP STIP)	0% to 5%	2.96%	Cash Equivalents (CAPP STIP)	0% to 5%	2.96%
JRS			MPORS		
STIP	1% to 4%	2.95%	STIP	1% to 4%	2.94%
Domestic Equity	24% to 38%	28.86%	Domestic Equity	24% to 38%	28.87%
International Equities	12% to 24%	17.25%	International Equities	12% to 24%	17.25%
Private Equity	9% to 15%	11.96%	Private Equity	9% to 15%	11.96%
Natural Resources	0% to 6%	2.91%	Natural Resources	0% to 6%	2.91%
Real Estate	4% to 12%	7.50%	Real Estate	4% to 12%	7.50%
TIPS	2% to 6%	4.29%	TIPS	2% to 6%	4.29%
Broad Fixed Income	0% to 3%	1.32%	Broad Fixed Income	0% to 3%	1.32%
US Treasury/Agency Fixed Income	6% to 15%	8.08%	US Treasury/Agency Fixed Income	6% to 15%	8.08%
Investment Grade Credit	2% to 6%	3.50%	Investment Grade Credit	2% to 6%	3.50%
Agency Mortgage-Backed Securities	2% to 8%	3.93%	Agency Mortgage-Backed Securities	2% to 8%	3.93%
High Yield	2% to 6%	3.11%	High Yield	2% to 6%	3.11%
Diversified Strategies	0% to 4%	1.38%	Diversified Strategies	0% to 4%	1.38%
Cash Equivalents (CAPP STIP)	0% to 5%	2.96%	Cash Equivalents (CAPP STIP)	0% to 5%	2.96%
HPORS			FURS		
STIP	1% to 4%	2.94%	STIP	1% to 4%	2.95%
Domestic Equity	24% to 38%	28.87%	Domestic Equity	24% to 38%	28.86%
International Equities	12% to 24%	17.25%	International Equities	12% to 24%	17.25%
Private Equity	9% to 15%	11.96%	Private Equity	9% to 15%	11.96%
Natural Resources	0% to 6%	2.91%	Natural Resources	0% to 6%	2.91%
Real Estate	4% to 12%	7.50%	Real Estate	4% to 12%	7.50%
TIPS	2% to 6%	4.29%	TIPS	2% to 6%	4.29%
Broad Fixed Income	0% to 3%	1.32%	Broad Fixed Income	0% to 3%	1.32%
US Treasury/Agency Fixed Income	6% to 15%	8.08%	US Treasury/Agency Fixed Income	6% to 15%	8.08%
Investment Grade Credit	2% to 6%	3.50%	Investment Grade Credit	2% to 6%	3.50%
Agency Mortgage-Backed Securities	2% to 8%	3.93%	Agency Mortgage-Backed Securities	2% to 8%	3.93%
High Yield	2% to 6%	3.11%	High Yield	2% to 6%	3.11%
Diversified Strategies	0% to 4%	1.38%	Diversified Strategies	0% to 4%	1.38%
Cash Equivalents (CAPP STIP)	0% to 5%	2.96%	Cash Equivalents (CAPP STIP)	0% to 5%	2.96%
SRS			VFCA		
STIP	1% to 4%	2.99%	STIP	1% to 4%	3.32%
Domestic Equity	24% to 38%	28.85%	Domestic Equity	24% to 38%	28.75%
International Equities	12% to 24%	17.24%	International Equities	12% to 24%	17.18%
Private Equity	9% to 15%	11.95%	Private Equity	9% to 15%	11.91%
Natural Resources	0% to 6%	2.91%	Natural Resources	0% to 6%	2.90%
Real Estate	4% to 12%	7.49%	Real Estate	4% to 12%	7.47%
TIPS	2% to 6%	4.29%	TIPS	2% to 6%	4.27%
Broad Fixed Income	0% to 3%	1.32%	Broad Fixed Income	0% to 3%	1.32%
US Treasury/Agency Fixed Income	6% to 15%	8.08%	US Treasury/Agency Fixed Income	6% to 15%	8.05%
Investment Grade Credit	2% to 6%	3.50%	Investment Grade Credit	2% to 6%	3.49%
Agency Mortgage-Backed Securities	2% to 8%	3.93%	Agency Mortgage-Backed Securities	2% to 8%	3.92%
High Yield	2% to 6%	3.11%	High Yield	2% to 6%	3.10%
Diversified Strategies	0% to 4%	1.38%	Diversified Strategies	0% to 4%	1.37%
Cash Equivalents (CAPP STIP)	0% to 5%	2.96%	Cash Equivalents (CAPP STIP)	0% to 5%	2.95%

INVESTMENT SECTION

PERS-DCRP Disability OPEB

Pursuant to MPERA and BOI's plan to provide diversification of PERS-DCRP Disability OPEB assets, the assets were further diversified into longer term asset classes during the fiscal year ending June 30, 2016. In prior fiscal years, the assets had been solely invested in the STIP.

Investment Fees and Commissions

Throughout the fiscal year, the investment expense for certain investments are netted against the investment earnings. At year end, investment earnings are "grossed up" to report the investment expense for the external manager, custodial bank fees and the BOI administrative cost. This process was implemented July 1, 1995, in compliance with GASB Statement No. 25.

Fiscal 2019 BOI Administrative Expense, Fees, and Commissions										
	<u>PERS</u>	<u>PERS- DC Disability OPEB</u>	<u>JRS</u>	<u>HPORS</u>	<u>SRS</u>	<u>GWPORS</u>	<u>MPORS</u>	<u>FURS</u>	<u>VFCA</u>	<u>TOTAL</u>
CAPP	\$35,770,948		\$633,930	\$ 920,753	\$2,252,215	\$1,223,470	\$2,560,747	\$ 2,671,655	\$ 232,891	\$ 46,266,609
STIP	231,676		3,845	5,955	14,953	7,947	16,621	17,478	1,439	299,914
SMI¹		7,435								7,435
Totals	\$36,002,624	\$ 7,435	\$637,775	\$ 926,708	\$2,267,168	\$1,231,417	\$2,577,368	\$ 2,689,133	\$ 234,330	\$ 46,573,958

¹SMI is the acronym for Separately Managed Investments, which PERS-DC Disability OPEB is invested in Equity Investments.

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INVESTMENT SECTION

Public Employees' Retirement Board A Component Unit of the State of Montana Largest Holdings (by portfolio base market value) as of June 30, 2019 (in thousands)

A complete list of the portfolio holdings can be obtained by contacting the Montana Board of Investments. The information below is PERB's presentation of the largest holdings.

Par Value	Broad Fixed Income Pension Asset Class	Base Market Value
\$ 41,760,000	US TREASURY N/B	\$ 43,352,122
23,930,000	TREASURY BILL	23,700,332
13,190,000	FNMA TBA 30 YR 4.5	13,779,994
11,770,000	SP9FDCSL7 CDS USD R F 1.00000	12,020,610
11,210,246	SHORT TERM INVESTMENT FUND	11,210,246
7,170,000	FNMA TBA 30 YR 5	7,577,055
6,905,000	FNMA TBA 30 YR 3.5	7,058,360
6,845,000	FNMA TBA 30 YR 3	6,897,090
5,224,572	FANNIEMAE ACES	5,232,537
3,770,000	FNMA POOL AN1614	3,762,399

PERS' shares represent 49.81% of the total Broad Fixed Income Pension Asset Class at market.

JRS' shares represent 0.88% of the total Broad Fixed Income Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Broad Fixed Income Pension Asset Class at market.

SRS' shares represent 3.18% of the total Broad Fixed Income Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Broad Fixed Income Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Broad Fixed Income Pension Asset Class at market.

FURS' shares represent 3.75% of the total Broad Fixed Income Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Broad Fixed Income Pension Asset Class at market.

Par Value	Domestic Equity Pension Asset Class	Base Market Value
\$ 53,954	DIMENSIONAL FUND ADVISORS INC	\$ 165,918,145
874,651	MICROSOFT CORP	117,168,248
6,112,587	BLK MSCI USA SMALL CAP EQ	98,537,222
49,949	AMAZON.COM INC	94,584,925
461,242	APPLE INC	91,289,017
69,410,866	STATE STREET BANK + TRUST CO	69,410,866
45,077	ALPHABET INC CL C	48,724,180
226,174	FACEBOOK INC CLASS A	43,651,582
32,208	ALPHABET INC CL A	34,874,822
131,834	MASTERCARD INC A	34,874,048

PERS' shares represent 49.81% of the total Domestic Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total Domestic Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Domestic Equity Pension Asset Class at market.

SRS' shares represent 3.18% of the total Domestic Equity Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Domestic Equity Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Domestic Equity Pension Asset Class at market.

FURS' shares represent 3.75% of the total Domestic Equity Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Domestic Equity Pension Asset Class at market.

Public Employees' Retirement Board
A Component Unit of the State of Montana
Largest Holdings (by portfolio base market value)
as of June 30, 2019
(in thousands)

Par Value	High Yield Pension Asset Class	Base Market Value
\$ 20,983,028	SHORT TERM INVESTMENT FUND	\$ 20,983,028
6,811,000	CCO HLDGS LLC/CAP CORP	7,022,960
6,270,000	CSC HOLDINGS LLC	6,679,206
6,091,000	SPRINT CORP	6,484,857
5,770,000	BAUSCH HEALTH COS INC	5,945,345
5,149,000	SIRIUS XM RADIO INC	5,274,705
3,960,000	TENET HEALTHCARE CORP	4,021,739
3,850,509	REYNOLDS GRP ISS/REYNOLD	3,911,620
3,590,000	BERRY GLOBAL INC	3,684,379
3,452,000	SPRINGLEAF FINANCE CORP	3,682,578

PERS' shares represent 49.81% of the total High Yield Pension Asset Class at market.

JRS' shares represent 0.88% of the total High Yield Pension Asset Class at market.

HPORS' shares represent 1.28% of the total High Yield Pension Asset Class at market.

SRS' shares represent 3.18% of the total High Yield Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total High Yield Pension Asset Class at market.

MPORS' shares represent 3.58% of the total High Yield Pension Asset Class at market.

FURS' shares represent 3.75% of the total High Yield Pension Asset Class at market.

VFCA's shares represent 0.34% of the total High Yield Pension Asset Class at market.

Par Value	International Equity Pension Asset Class	Base Market Value
\$ 30,911,705	ACWI EX US SUPERFUN	\$ 869,250,416
5,001,781	DFA INTERNATIONAL SMALL COMPAN	89,031,701
71,097,746	SHORT TERM INVESTMENT FUND	71,097,746
4,156,518	BLACKROCK ACWI EX US SMALL CAP	57,159,552
1,383,028	DFA EMERGING MARKETS SMALL CAP	28,365,899
81,932	SAP SE	11,267,415
114,772	NOVARTIS AG REG	10,500,167
307,588	ROYAL DUTCH SHELL PLC A SHS	10,064,226
383,202	RELX PLC	9,312,656
164,872	MSCI EMF	8,432,328

PERS' shares represent 49.81% of the total International Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total International Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total International Equity Pension Asset Class at market.

SRS' shares represent 3.18% of the total International Equity Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total International Equity Pension Asset Class at market.

MPORS' shares represent 3.58% of the total International Equity Pension Asset Class at market.

FURS' shares represent 3.75% of the total International Equity Pension Asset Class at market.

VFCA's shares represent 0.34% of the total International Equity Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2019

(in thousands)

Par Value	Investment Grade Credit Pension Asset Class	Base Market Value
\$ 10,000,000	CITIBANK CREDIT CARD ISSUANCE	\$ 10,066,524
9,000,000	JPMORGAN CHASE + CO	9,422,666
8,192,000	HSBC HOLDINGS PLC	8,482,282
7,360,000	GOLDMAN SACHS GROUP INC	7,676,955
7,036,000	VERIZON COMMUNICATIONS	7,567,796
7,000,000	ALTRIA GROUP INC	7,524,798
7,500,000	AIR LIQUIDE FINANCE	7,440,745
6,950,000	FEDEX CORP	7,434,245
7,000,000	WELLTOWER INC	7,375,277
7,000,000	COMCAST CORP	7,328,265

PERS' shares represent 49.81% of the total Investment Grade Credit Pension Asset Class at market.

JRS' shares represent 0.88% of the total Investment Grade Credit Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Investment Grade Credit Pension Asset Class at market.

SRS' shares represent 3.18% of the total Investment Grade Credit Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Investment Grade Credit Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Investment Grade Credit Pension Asset Class at market.

FURS' shares represent 3.75% of the total Investment Grade Credit Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Investment Grade Credit Pension Asset Class at market.

Par Value	Mortgage Backed Pension Asset Class	Base Market Value
\$ 25,875,005	GOVERNMENT NATIONAL MORTGAGE A	\$ 26,262,076
21,003,602	FREDDIE MAC	21,246,052
19,590,624	NEW RESIDENTIAL MORTGAGE LOAN	20,957,483
18,011,639	SHORT TERM INVESTMENT FUND	18,011,639
17,236,312	COMM MORTGAGE TRUST	17,414,676
14,829,985	FNMA POOL BJ7881	15,102,524
12,002,738	FANNIE MAE	12,479,438
12,020,875	FED HM LN PC POOL G08732	12,169,839
11,463,646	FED HM LN PC POOL C91856	11,833,860
11,141,031	FED HM LN PC POOL C91782	11,562,258

PERS' shares represent 49.81% of the total Mortgage Backed Pension Asset Class at market.

JRS' shares represent 0.88% of the total Mortgage Backed Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Mortgage Backed Pension Asset Class at market.

SRS' shares represent 3.18% of the total Mortgage Backed Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Mortgage Backed Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Mortgage Backed Pension Asset Class at market.

FURS' shares represent 3.75% of the total Mortgage Backed Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Mortgage Backed Pension Asset Class at market.

Public Employees' Retirement Board
A Component Unit of the State of Montana
Largest Holdings (by portfolio base market value)
as of June 30, 2019
(in thousands)

Par Value	Natural Resources Pension Asset Class	Base Market Value
\$ 38,411,746	MOLPUS WOODLANDS FUND III LP	\$ 44,894,420
25,278,000	ORM TIMBER FUND III LLC	32,912,082
19,379,358	EIF US POWER FUND IV LP	23,759,946
15,762,592	WARWICK PARTNERS III, L.P.	22,533,335
16,325,630	MOUNTAIN CAPITAL PARTNERS, LP	19,666,295
13,408,369	ARCLIGHT ENERGY PART FD VI LP	18,737,083
16,961,679	RMS FOREST GROWTH III LP	18,319,698
16,877,914	WHITE DEER ENERGY II LP	17,714,535
11,267,540	TRILANTIC ENERGY	15,714,681
10,394,970	ORM TIMBER FUND IV LLC	10,776,071

PERS' shares represent 49.81% of the total Natural Resources Pension Asset Class at market.

JRS' shares represent 0.88% of the total Natural Resources Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Natural Resources Pension Asset Class at market.

SRS' shares represent 3.18% of the total Natural Resources Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Natural Resources Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Natural Resources Pension Asset Class at market.

FURS' shares represent 3.75% of the total Natural Resources Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Natural Resources Pension Asset Class at market.

Par Value	Private Equity Pension Asset Class	Base Market Value
\$ 21,965,796	HCI EQUITY PARTNERS IV LP	\$ 44,847,697
23,165,460	NORTHGATE V LP	44,788,170
42,208,319	DEERPATH CAPITAL ADVANTAGE IV	43,096,339
35,315,187	OCP ASIA FUND III LP	41,001,356
36,604,474	VIDA INSURANCE CRD OPP FD II	37,348,094
24,916,884	ORCHARD LANDMARK II LP	36,559,149
12,298,764	AXIOM ASIA PRIVATE CAP FND III	36,007,842
24,546,907	AXIOM ASIA IV LP	32,896,513
21,616,658	BDCM OPPORTUNITY FUND III LP	31,387,452
22,208,720	PINE BROOK FUND II, L.P.	29,177,394

PERS' shares represent 49.81% of the total Private Equity Pension Asset Class at market.

JRS' shares represent 0.88% of the total Private Equity Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Private Equity Pension Asset Class at market.

SRS' shares represent 3.18% of the total Private Equity Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Private Equity Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Private Equity Pension Asset Class at market.

FURS' shares represent 3.75% of the total Private Equity Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Private Equity Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Largest Holdings (by portfolio base market value)

as of June 30, 2019

(in thousands)

Par Value	Real Estate Pension Asset Class	Base Market Value
\$ 64,561	HEITMAN AMERICA RE TRUST LP	\$ 80,941,189
5,901,802	FIDELITY ADVISOR SER IV	51,699,786
400,000	CENTERSQUARE DOMESTIC REIT MU6	40,103,558
21,059,128	CBRE STRATEGIC PART US VALUE 8	22,588,463
21,902,374	SHORT TERM INVESTMENT FUND	21,902,374
14,789,626	STOLTZ REAL ESTATE FUND V	21,719,896
18,564,181	DRA GROWTH AND INCOME VIII	19,973,685
16,082,216	STOCKBRIDGE VALUE FUND II	19,956,663
16,138,000	AG REALTY REALTY FUND IX LP	18,920,595
17,953,507	EQUUS INVT PARTNERSHIP X LP	18,728,775

PERS' shares represent 49.81% of the total Real Estate Pension Asset Class at market.

JRS' shares represent 0.88% of the total Real Estate Pension Asset Class at market.

HPORS' shares represent 1.28% of the total Real Estate Pension Asset Class at market.

SRS' shares represent 3.18% of the total Real Estate Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total Real Estate Pension Asset Class at market.

MPORS' shares represent 3.58% of the total Real Estate Pension Asset Class at market.

FURS' shares represent 3.75% of the total Real Estate Pension Asset Class at market.

VFCA's shares represent 0.34% of the total Real Estate Pension Asset Class at market.

Par Value	TIPS Pension Asset Class	Base Market Value
\$ 494,021,245	TSY INFL IX N/B	\$ 496,524,704
10,310,753	SHORT TERM INVESTMENT FUND	10,310,753

PERS' shares represent 49.81% of the total TIPS Pension Asset Class at market.

JRS' shares represent 0.88% of the total TIPS Pension Asset Class at market.

HPORS' shares represent 1.28% of the total TIPS Pension Asset Class at market.

SRS' shares represent 3.18% of the total TIPS Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total TIPS Pension Asset Class at market.

MPORS' shares represent 3.58% of the total TIPS Pension Asset Class at market.

FURS' shares represent 3.75% of the total TIPS Pension Asset Class at market.

VFCA's shares represent 0.34% of the total TIPS Pension Asset Class at market.

Public Employees' Retirement Board*A Component Unit of the State of Montana***Largest Holdings (by portfolio base market value)****as of June 30, 2019****(in thousands)**

Par Value	US Treasury Pension Asset Class	Base Market Value
\$ 696,560,000	US TREASURY N/B	\$ 708,325,582
93,780,000	FEDERAL HOME LOAN BANK	95,163,760
24,600,000	FEDERAL FARM CREDIT BANK	24,555,650
22,000,000	FANNIE MAE	21,775,776
19,860,841	FNMA POOL BM4550	20,838,336
10,913,412	FNMA POOL 471456	11,095,889
10,000,000	FNMA POOL AN4415	10,335,743
9,536,921	FRESB MULTIFAMILY MORTGAGE PAS	9,840,646
9,679,837	FNMA POOL 466675	9,795,458
6,198,098	FNMA POOL 469739	6,427,530

PERS' shares represent 49.81% of the total US Treasury Pension Asset Class at market.

JRS' shares represent 0.88% of the total US Treasury Pension Asset Class at market.

HPORS' shares represent 1.28% of the total US Treasury Pension Asset Class at market.

SRS' shares represent 3.18% of the total US Treasury Pension Asset Class at market.

GWPORS' shares represent 1.74% of the total US Treasury Pension Asset Class at market.

MPORS' shares represent 3.58% of the total US Treasury Pension Asset Class at market.

FURS' shares represent 3.75% of the total US Treasury Pension Asset Class at market.

VFCA's shares represent 0.34% of the total US Treasury Pension Asset Class at market.

INVESTMENT SECTION

Public Employees' Retirement Board A Component Unit of the State of Montana Investment Summary as of June 30, 2019 (in thousands)

Type of Investment	PERS-DBRP ¹		JRS		HPORS		SRS	
	Fair value	% of Total Fair Value	Fair Value	% of Total Fair Value	Fair Value	% of Total Fair Value	Fair Value	% of Total Fair Value
<i>Fixed Income</i>								
TIPS	\$ 252,832	4.29%	\$ 4,482	4.29%	\$ 6,504	4.29%	\$ 16,140	4.29%
Broad Fixed Income	77,882	1.32%	1,381	1.32%	2,003	1.32%	4,971	1.32%
US Treasury & Agency	475,947	8.08%	8,437	8.08%	12,243	8.08%	30,381	8.08%
Investment Grade Credit	206,131	3.50%	3,654	3.50%	5,302	3.50%	13,158	3.50%
Mortgage Backed	231,572	3.93%	4,105	3.93%	5,957	3.93%	14,782	3.93%
High Yield	183,127	3.11%	3,246	3.11%	4,710	3.11%	11,690	3.11%
Diversifying Strategies	81,189	1.38%	1,439	1.38%	2,088	1.38%	5,183	1.38%
Cash Equivalents	174,443	2.96%	3,092	2.96%	4,487	2.96%	11,135	2.96%
<i>Equities</i>								
Domestic Equity	1,700,173	28.86%	30,139	28.86%	43,733	28.87%	108,528	28.85%
International Equity	1,015,977	17.25%	18,010	17.25%	26,133	17.25%	64,853	17.24%
<i>Alternative Investments</i>								
Private Equity	704,236	11.96%	12,484	11.96%	18,115	11.96%	44,954	11.95%
Natural Resources	171,525	2.91%	3,041	2.91%	4,412	2.91%	10,949	2.91%
Real Estate	441,641	7.50%	7,829	7.50%	11,360	7.50%	28,191	7.49%
<i>Short Term Investments</i>								
Short Term Investments Pool (STIP) ¹	174,058	2.95%	3,078	2.95%	4,437	2.94%	11,293	2.99%
Total	\$ 5,890,733	100.00%	\$ 104,417	100.00%	\$ 151,484	100.00%	\$ 376,208	100.00%

¹ These figures only include those of the PERS-Defined Benefit Retirement Plan, whereas the financial statements include the total in the Defined Benefit Retirement Plan and the Defined Benefit Education Program.

Public Employees' Retirement Board
A Component Unit of the State of Montana
Investment Summary
as of June 30, 2019
(in thousands)

Type of Investment	GWPORS		MPORS		FURS		VFCA	
	Fair value	% of Total Fair Value	Fair Value	% of Total Fair Value	Fair Value	% of Total Fair Value	Fair Value	% of Total Fair Value
<i>Fixed Income</i>								
TIPS	\$ 8,822	4.29%	\$ 18,151	4.29%	\$ 19,046	4.29%	\$ 1,697	4.27%
Broad Fixed Income	2,717	1.32%	5,591	1.32%	5,867	1.32%	522	1.32%
US Treasury & Agency	16,607	8.08%	34,168	8.08%	35,854	8.08%	3,192	8.05%
Investment Grade Credit	7,192	3.50%	14,798	3.50%	15,528	3.50%	1,383	3.49%
Mortgage Backed	8,080	3.93%	16,624	3.93%	17,445	3.93%	1,553	3.92%
High Yield	6,390	3.11%	13,147	3.11%	13,795	3.11%	1,228	3.10%
Diversifying Strategies	2,833	1.38%	5,828	1.38%	6,116	1.38%	545	1.37%
Cash Equivalents	6,087	2.96%	12,523	2.96%	13,141	2.96%	1,170	2.95%
<i>Equities</i>								
Domestic Equity	59,322	28.86%	122,055	28.87%	128,077	28.86%	11,403	28.75%
International Equity	35,449	17.25%	72,936	17.25%	76,535	17.25%	6,814	17.18%
<i>Alternative Investments</i>								
Private Equity	24,572	11.95%	50,557	11.96%	53,051	11.96%	4,723	11.91%
Natural Resources	5,985	2.91%	12,314	2.91%	12,921	2.91%	1,150	2.90%
Real Estate	15,410	7.50%	31,705	7.50%	33,270	7.50%	2,962	7.47%
<i>Short Term Investments</i>								
Short Term Investments Pool (STIP)	6,084	2.96%	12,369	2.94%	13,081	2.95%	1,326	3.32%
Total	\$ 205,550	100.00%	\$ 422,766	100.00%	\$ 443,727	100.00%	\$ 39,668	100.00%

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ACTUARIAL SECTION



Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

Via Electronic Mail

November 12, 2019

Public Employees' Retirement Board
100 North Park Avenue, Suite 200
Helena, Montana 59620

Dear Members of the Board:

At your request, we have conducted the June 30, 2019 actuarial valuation for each of the eight funded pension programs administered by the Public Employees' Retirement Board. Actuarial valuations are performed annually. This valuation reflects the benefit provisions and contribution rates in effect as of July 1, 2019.

Valuation Results

The calculations have been made on a basis consistent with our understanding of the Systems' funding requirements and goals. The funding objective for each System is to pay the Normal Cost plus an amount that amortizes the Unfunded Actuarial Liability over a period of not more than 30 years. The member, employer, and state contributions are determined by statute. Our valuations demonstrate that the projected income stream from the expected contributions are sufficient to pay the Normal Costs and amortize the Unfunded Actuarial Liability as a level percentage of future payroll for the following six Systems. The amortization periods are shown below.

- Public Employees' Retirement System (PERS) 36 years
- Highway Patrol Officers' Retirement System (HPORS) 42 years
- Municipal Police Officers' Retirement System (MPORS) 18 years
- Firefighters' Unified Retirement System (FURS) 9 years
- Sheriffs' Retirement System (SRS) 21 Years
- Game Wardens' and Peace Officers' Retirement System (GWPORS) 53 Years

The amortization periods using the Market Value of Assets for all of the Systems are shown below.

- Public Employees' Retirement System (PERS) 36 years
- Highway Patrol Officers' Retirement System (HPORS) 42 years
- Municipal Police Officers' Retirement System (MPORS) 18 years
- Firefighters' Unified Retirement System (FURS) 9 years
- Sheriffs' Retirement System (SRS) 21 Years
- Game Wardens' and Peace Officers' Retirement System (GWPORS) 53 Years

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Public Employees' Retirement Board
November 12, 2019
Page 2



Based on the assumed level of future revenue, the Unfunded Actuarial Liability for the Volunteer Firefighters' Compensation Act (VFCA) is expected to be amortized over 5 years using the Actuarial Value of Assets and over 5 years using Market Value of Assets. The Judges' Retirement System (JRS) has an Actuarial Surplus as of June 30, 2019.

The changes in funded status (on an Actuarial Value of Assets basis) for each System are shown below:

	<u>2018</u>	<u>2019</u>
PERS	74%	74%
JRS	161%	161%
HPORS	64%	65%
SRS	81%	82%
GWPORS	83%	84%
MPORS	68%	69%
FURS	78%	80%
VFCA	83%	85%

The asset values used to determine unfunded liabilities are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. Due to net investment gains, which are being recognized over four years, the Actuarial Value of Assets as of June 30, 2019 are more than the Market Value of Assets for all of the Systems except for PERS. If the Market Value of Assets had been used to determine the funded status for these, the funded status of each of the Systems would have been lower compared to using the Actuarial Value of Assets.

HB 454 requires the PERS actuarial valuation to determine whether certain funded status and amortization thresholds are met. Once met, certain temporary employer and member contributions are discontinued. Based upon our June 30, 2019 valuation results, temporary employer and member contributions must remain in place.

At the request of the Board, we also performed a valuation as of June 30, 2019 of the PERS Long Term Disability Plan under the Defined Contribution Plan. As of June 30, 2019 the Plan has an Actuarial Surplus. The funded ratio is 105%.

Assumptions and Methods

The actuarial assumptions used in the valuations are based on an experience study for the six-year period ending June 30, 2016. The assumptions and methods used for funding purposes conform to the parameters set by accounting principles of the United States of America as promulgated by the Governmental Accounting Standards Board. In addition, the assumptions and methods used for funding purposes meet the parameters set forth by Actuarial Standards of Practice.

The actuarial assumptions reflect our understanding of the likely future experience of the System, and the assumptions as a whole represent the best estimate for the future experience of the System. Future actuarial results may differ significantly from the current results presented in this report

Public Employees' Retirement Board
November 12, 2019
Page 3



due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Determinations for purposes other than meeting these requirements may be significantly different from the results in this letter. Accordingly, additional determinations may be needed for other purposes.

Reliance on Others

In preparing the actuarial valuations, we relied on information supplied by the staff of the Public Employee Retirement Administration. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Supporting Schedules

The following schedules in this Actuarial Section were provided by Cavanaugh Macdonald Consulting to support these actuarial results:

- Schedule of Active Member Composition
- Schedule of Retiree Member Composition
- Schedule of Disabled Member Composition
- Schedule of Converted Disabled Member Composition
- Schedule of Beneficiary Member Composition

Other information presented in this Actuarial Section as of June 30, 2019, and in various parts of the Financial and Statistical Sections is based on information found in our actuarial valuation reports. Numbers reported for years prior to the fiscal year ending June 30, 2016 were developed by the prior actuary and are reported per their valuation reports.

Certification

This is to certify that the independent consulting actuaries, Todd Green and Beverly Bailey, are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. They have experience in performing valuations for public retirement systems. The valuations were prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Public Employees' Retirement Board
November 12, 2019
Page 4

This letter was prepared exclusively for the Public Employees' Retirement Board for the purpose described herein. Other users of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cavanaugh Macdonald Consulting LLC assumes no duty or liability to any other user.

Respectfully submitted,

/s/ Todd B. Green
Todd B. Green, ASA, FCA, MAAA
President

/s/ Beverly V. Bailey
Beverly V. Bailey, ASA, EA, FCA, MAAA
Senior Actuary

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Actuarial Assumptions and Methods

Background

The results of the actuarial valuation are based upon the assumptions and funding policies adopted by the PERB and statutory funding requirements. Assumptions and methods are reviewed against actual experience at least once every six years through the completion of the Actuarial Experience Study. In general, the assumptions and methods used in the June 30, 2019 valuation are based on the most recent actuarial experience study for the six-year period July 1, 2010 to June 30, 2016, adopted by the PERB on May 11, 2017. The recommendations were formed on the basis of recent experience of the plans and on the current expectations of future economic conditions. The actuarial methods, assumptions, factors, and any changes in the actuarial assumptions are described in this section.

Records and Data

The data used in the valuation consists of financial information; records of age, sex, service, salary, contribution rates, and account balances of contributing members; and records of age, sex, and amount of benefit for retired members and beneficiaries. All data supplied to the actuary by MPERA was accepted for valuation purposes without audit.

Valuation Date

The valuation date is June 30 of each year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

Actuarial Cost Method

The actuarial valuation was prepared using the entry age actuarial cost method. Under this method, the actuarial present value of future benefits is determined for each member and allocated equitably as a level percentage over the earnings of the member between entry age and assumed exit age. The portion of the actuarial present value of future benefits allocated to the current valuation year is called the Normal Cost. The normal cost is the theoretical contribution rate, which will meet the ongoing costs of a group of average new employees. The portion of the present value of future benefits allocated to prior years of service is called the actuarial accrued liability. The portion of the actuarial liability in excess of plan assets is amortized to develop an additional cost or savings which is added to each year's employer normal cost. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. Actuarial gains and losses are directly reflected in the size of the unfunded actuarial liability.

Actuarial Value of Assets

Asset values were supplied by MPERA and were accepted without audit by the actuary. The Actuarial Value of Assets is the current market value, adjusted by a four-year smoothing of gains and losses on a market value basis. The asset adjustment method lessens the volatility in asset values that could occur because of fluctuations in market conditions. Each year's gain or loss is determined as the difference between the actual market return and the expected market return using the assumed rate of investment return.

ACTUARIAL SECTION

Investment Return

The actuarial assumption for the rate of investment return is 7.65%, consisting of a price inflation assumption of 2.75% and a real rate of return assumption of 4.90%. The future investment earnings of the assets of the plans are assumed to accrue at an annual rate of 7.65%, net investment-related expenses.

Administrative Expenses and Investment Expenses

The investment expenses of the systems are assumed to be funded by investment earnings in excess of 7.65% per year.

Administrative expense amounts are recognized by an additional amount added to the normal cost contribution rate and are system specific. They vary from year to year based on each system's prior year's actual administrative expenses. The table below shows the administrative expense amounts for this fiscal year 2019 and the previous fiscal year 2018, they are assumed to be equal to a percentage of payroll. VFCA is a flat dollar amount because members are unpaid volunteers.

System	2019	2018	System	2019	2018
PERS-DBRP	0.30%	0.26%	GWPORS	0.16%	0.23%
JRS	0.08%	0.17%	MPORS	0.15%	0.23%
HPORS	0.18%	0.27%	FURS	0.13%	0.25%
SRS	0.16%	0.23%	VFCA	\$201,971	\$70,586

Amortization of the Unfunded Actuarial Liability (UAL)

The unfunded actuarial liability is amortized as a level percentage of future payroll, except for VFCA, which is amortized as a level dollar because there is no payroll.

Interest on Member Contributions

The actuarial assumption for the interest on member contributions is 2.75%. Interest on member contributions at the time of the valuation was assumed to accrue at a net annual rate of 2.75%, with the exception of VFCA, which has no member contributions.

Capital Preservation Premium on MPORS DROP Accounts

Effective July 1, 2009, the interest earned on MPORS DROP accounts changed from the actual trust fund earnings with a floor of zero to the actuarial assumed rate of return.

Future Salaries

Estimates of future salaries are based on two types of assumptions. Rates of increase in the general wage level of the membership are directly related to inflation, while individual salary changes due to promotion and longevity, referred to as the merit scale, occur even in the absence of inflation. The assumed increase in future salaries due to general wage growth is 3.50% per year for all plans. The merit scale is based on years of service and is in addition to the wage growth. The merit scale is calculated independently for each plan based on the factors applicable to the plan. VFCA is excluded from this calculation because members are unpaid volunteers.

Probability of Marriage and Dependent Children

The probability of marriage assumption is 100% of all non-retired members. Male spouses are assumed to be three years older than female spouses for all systems.

If death occurs in active status, all members are assumed to have an eligible surviving spouse with no dependent children.

Mortality

The mortality assumptions among contributing members, terminated vested members, service retired members, and beneficiaries are based on RP-2000 Combined Employee and Annuitant Mortality Tables projected to 2020 using scale BB, set back one year for males.

The mortality assumptions among Disabled Retirees are based on the RP-2000 Combined Employee and Annuitant Mortality Tables with no projections. No future mortality improvement is assumed. The sample mortality rates for healthy retirees, beneficiaries and non-retired members and for the disabled retirees for all plans is presented in the following tables.

Healthy Retirees, Beneficiaries and Non-Retired Members Sample Mortality Rates		
Age	Male	Female
50	0.1879%	0.1578%
55	0.3010%	0.2458%
60	0.5271%	0.4135%
65	0.9041%	0.7624%
70	1.4636%	1.3151%
75	2.5057%	2.2077%
80	4.2816%	3.6037%
85	7.3750%	6.0833%
90	13.0721%	10.5549%

Disabled Retirees Sample Mortality Rates		
Age	Male	Female
50	0.214%	0.168%
55	0.362%	0.272%
60	0.675%	0.506%
65	1.274%	0.971%
70	2.221%	1.674%
75	3.783%	2.811%
80	6.437%	4.588%
85	11.076%	7.745%
90	18.341%	13.168%

Service Retirement

The assumed rates of service retirement used in the valuations are dependent upon age and years of service and differ between plans. The rates are based on the actual experience of the individual plans. Under all plans, vested terminated members are assumed to retire when first eligible for an unreduced benefit.

Disablement

The assumed rates of disablement are dependent upon age and differ between plans. It is further assumed that 75% of all disabilities are duty related for HPORS, SRS, and GWPORS. For JRS it is assumed that 10% of all disabilities are duty-related. For PERS and VFCA all disabilities are assumed to be duty related. For MPORS and FURS there is no distinction between duty and non-duty related disabilities. It is assumed that all disabilities are permanent and that no disabled member will recover and return to work.

Other Terminations of Membership

The assumed rates of termination, other than for retirement, death, or disability, are calculated individually for each plan. The JRS does not assume termination for any reason other than retirement, death, or disability.

Terminating Members Electing a Refund

It is assumed that all terminating members that are non-vested will receive an immediate withdrawal of their member accumulated contributions. The probability of a terminating, vested member electing a refund of the member account balance is based on age and is different for each plan as described in the actuarial valuation. The actuary estimates the present value of future benefits for terminated vested members based on the greater of the present value of their deferred benefit at age 60 or their available contribution account. These assumptions do not apply to the JRS or VFCA.

Replacement of Terminated Members

The ages at entry and distribution by sex of future members are assumed to average the same as those of the present members they replace. If the number of active members should increase, it is further assumed that the average entry age of the larger group will be the same, from an actuarial standpoint, as that of the present group. Under these assumptions, the normal cost rates for active members will not vary with the termination of present members.

Actuarial Factors

Retirement actuarial factors are used in determining joint, survivor and period certain annuities.

Records with no Birth Date

New records with no birth date are assumed to be 37 years old. Records that are not new and have no birth date used the same birth date as the prior year's valuation.

Active Records with a Salary Less than \$1,000

These members are included in the active counts, however the pay of these members is not included in the Valuation Projected Salaries. The liability for these members is their accumulated member contribution payable on the valuation date. This assumption does not apply to the JRS or VFCA.

Changes Since Last Valuation

There have been no assumption, benefit, contribution or method changes since the last valuation for all Plans, except PERS-DBRP. The PERS-DBRP experienced a contribution change: an employer supplemental contribution of 0.10% increase each fiscal year through 2024. For fiscal years beginning after June 30, 2024, the supplemental employer contribution will equal 2.27% of compensation.

There were no changes in any of the Plans' provisions since the last valuation. Please refer to Note C of the Notes to the Financial Statements in the Financial Section for the Plan Provisions of all Defined Benefit and Defined Contribution Plans.

Actuarial Audit

The PERB has periodic audits performed to monitor the quality of actuarial services performed. The last actuarial audit was performed January of 2015 by Cavanaugh Macdonald Consulting, LLC, acting as an independent auditing actuary prior to becoming PERB's actuary. The audit was limited to

reviewing then actuary Cheiron's work in preparing the June 30, 2014 actuarial valuation for the PERS-DBRP.

All results shown for valuations from July 1, 2009 to June 30, 2015 were derived from reports prepared by the prior actuary, Cheiron.

Calculations Based on the Market Value of Assets

Section 19-2-407, MCA requires the actuarial report to show how market performance is affecting the actuarial funding of the retirement systems. In the following table, the effect on each one of the defined benefit retirement systems is shown using the market value of assets.

System	At June 30, 2019			
	Market Value of Assets		Actuarial Value of Assets	
	Funded Ratio	Amortization Period in Years	Funded Ratio	Amortization Period in Years
PERS-DBRP	74.19%	36	74.19%	36
JRS	161.18%	0	161.23%	0
HPORS	64.52%	42	64.55%	42
SRS	81.53%	21	81.56%	21
GWPORS	84.18%	53	84.24%	53
MPORS	68.95%	19	69.23%	18
FURS	79.64%	9	79.97%	9
VFCA	84.46%	5	84.76%	5
<p>At June 30, 2019, the market value of assets for:</p> <ul style="list-style-type: none"> • PERS-DBRP was \$115,289 more than the actuarial value of assets. • JRS was \$32,364 less than the actuarial value of assets. Since JRS has a surplus, it has zero years to amortize the unfunded actuarial liability. • HPORS was \$73,259 less than the actuarial value of assets. • SRS was \$164,053 less than the actuarial value of assets. • GWPORS was \$156,873 less than the actuarial value of assets. • MPORS was \$1.8 million less than the actuarial value of assets. • FURS was \$1.9 million less than the actuarial value of assets. • VFCA was \$142,849 less than the actuarial value of assets. <p>These differences are due to the smoothing of investment gains and losses over a four-year period.</p>				

At June 30, 2019, the valuation of the **PERS-DCRP Disability OPEB Plan** is performed based on the market value of assets. As of June 30, 2019, the statutory contribution rates are sufficient to amortize the unfunded actuarial liability, and the funded ratio is 104.93%. The Plan's assets gained 6.77% on an annualized market value basis. This was above the assumed rate of return of 3.50%. The actuarial value of assets is set equal to the market value of assets.

A copy of the June 30, 2019 actuarial valuation reports for each Plan are available at our website, <http://mpera.mt.gov>.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Member Valuation Data

System	Valuation Date	Number Members (a)	Number ERs (b)	Covered Payroll (c)	Average Annual Pay ¹ (c/a)	% Pay Increase
PERS-DBRP	June 30, 2019	28,908	546	\$ 1,247,343,733	\$ 43,149	0.48%
	June 30, 2018	28,646	544	1,230,105,350	42,942	2.45%
	June 30, 2017	29,395	539	1,232,066,537	41,914	0.36%
	June 30, 2016	28,390	535	1,185,646,179	41,763	2.11%
	June 30, 2015	28,237	539	1,154,866,605	40,899	2.25%
	June 30, 2014	28,229	541	1,129,109,402	39,998	2.90%
	June 30, 2013	28,401	540	1,103,999,865	38,872	2.63%
	June 30, 2012	28,548	538	1,081,288,177	37,876	1.32%
	June 30, 2011	28,659	533	1,071,376,488	37,384	-0.54%
	June 30, 2010	28,834	533	1,083,779,866	37,587	4.43%
JRS	June 30, 2019	58	1	7,382,476	127,284	-3.98%
	June 30, 2018	55	1	7,290,904	132,562	6.44%
	June 30, 2017	56	1	6,974,470	124,544	-1.02%
	June 30, 2016	55	1	6,920,367	125,825	6.07%
	June 30, 2015	55	1	6,524,569	118,629	2.67%
	June 30, 2014	55	1	6,354,763	115,541	-0.58%
	June 30, 2013	54	1	6,275,682	116,216	1.34%
	June 30, 2012	54	1	6,192,732	114,680	9.70%
	June 30, 2011	54	1	5,645,110	104,539	-6.25%
	June 30, 2010	51	1	5,686,874	111,507	11.30%
HPORS²	June 30, 2019	232	1	15,177,612	65,421	-0.05%
	June 30, 2018	233	1	15,251,339	65,456	0.98%
	June 30, 2017	228	1	14,778,975	64,820	-5.80%
	June 30, 2016	222	1	15,275,964	68,811	13.98%
	June 30, 2015	241	1	14,549,378	60,371	-2.29%
	June 30, 2014	229	1	14,149,269	61,787	0.35%
	June 30, 2013	219	1	13,484,125	61,571	-1.43%
	June 30, 2012	218	1	13,617,653	62,466	7.19%
	June 30, 2011	214	1	12,471,575	58,278	2.82%
	June 30, 2010	230	1	13,035,971	56,678	10.13%
SRS	June 30, 2019	1,454	57	80,461,048	55,338	1.92%
	June 30, 2018	1,429	57	77,587,294	54,295	3.01%
	June 30, 2017	1,415	57	74,581,258	52,708	1.84%
	June 30, 2016	1,364	57	70,593,304	51,755	1.61%
	June 30, 2015	1,336	57	68,045,517	50,932	2.93%
	June 30, 2014	1,307	57	64,672,635	49,482	2.72%
	June 30, 2013	1,276	57	61,467,169	48,172	0.33%
	June 30, 2012	1,241	57	59,582,678	48,012	3.53%
	June 30, 2011	1,230	57	57,041,471	46,375	0.16%
	June 30, 2010	1,181	57	54,680,650	46,300	6.63%

¹ Average Annual Pay is based on Covered Payroll. Prior to FY2016 the prior actuary Cheiron used annualized salaries and not actual covered payroll.

² The number of members for HPORS and MPORS includes the DROP members.

The last actuarial valuation was performed as of June 30, 2019.

System	Valuation Date	Number Members (a)	Number ERs (b)	Covered Payroll (c)	Average Annual Pay ¹ (c/a)	% Pay Increase
GWPORS	June 30, 2019	1,021	7	\$ 51,676,963	\$ 50,614	0.58%
	June 30, 2018	1,010	7	50,823,150	50,320	3.13%
	June 30, 2017	1,012	7	49,381,004	48,795	2.44%
	June 30, 2016	989	7	47,108,310	47,632	5.38%
	June 30, 2015	993	7	44,884,739	45,201	3.68%
	June 30, 2014	955	7	41,636,566	43,598	7.25%
	June 30, 2013	971	7	39,471,105	40,650	3.12%
	June 30, 2012	972	7	38,316,733	39,421	-2.13%
	June 30, 2011	951	7	38,306,496	40,280	-1.33%
	June 30, 2010	966	7	39,435,882	40,824	7.66%
MPORS²	June 30, 2019	806	33	54,282,431	67,348	1.86%
	June 30, 2018	787	33	52,035,958	66,119	-1.10%
	June 30, 2017	727	33	48,603,580	66,855	-0.64%
	June 30, 2016	702	32	47,233,801	67,285	2.10%
	June 30, 2015	694	32	45,736,127	65,902	3.10%
	June 30, 2014	695	32	44,426,617	63,923	4.26%
	June 30, 2013	698	31	42,795,697	61,312	2.96%
	June 30, 2012	701	31	41,744,760	59,550	5.91%
	June 30, 2011	702	31	39,470,441	56,226	4.99%
	June 30, 2010	695	30	37,220,334	53,554	2.36%
FURS	June 30, 2019	722	27	50,756,445	70,300	1.34%
	June 30, 2018	691	27	47,934,517	69,370	4.04%
	June 30, 2017	678	27	45,208,091	66,679	-0.41%
	June 30, 2016	644	26	43,118,925	66,955	0.85%
	June 30, 2015	627	26	41,627,233	66,391	2.52%
	June 30, 2014	616	25	39,891,869	64,760	4.06%
	June 30, 2013	610	25	37,962,748	62,234	1.50%
	June 30, 2012	590	24	36,176,675	61,316	1.87%
	June 30, 2011	579	24	34,852,160	60,194	2.91%
	June 30, 2010	570	23	33,338,599	58,489	8.21%
VFCA	June 30, 2019	2,249				
	June 30, 2018	2,029				
	June 30, 2017	1,957				
	June 30, 2016	1,895				
	June 30, 2015	1,977				
	June 30, 2014	1,935				
	June 30, 2013	2,101				
	June 30, 2012	2,106				
	June 30, 2011	2,105				
	June 30, 2010	2,315				

Covered payroll is not applicable. Members are unpaid volunteers and do not contribute to the fund.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Member Composition

as of June 30, 2019

	PERS-DBRP	JRS	HPORS ¹	SRS	GWPORS	MPORS ¹	FURS	VFCA ²	PERS-DCRP
Total Count	28,892	58	213	1,454	1,021	741	722	2,245	2,871
Average Age	47.9	57.2	39.2	39.6	41.7	37.8	39.6	45.3	46.5
Average Service	9.3	7.8	9.6	7.2	8.0	8.2	10.4	9.2	7.3
Average Salary	\$ 43,923	\$ 133,692	\$ 66,106	\$ 56,002	\$ 50,985	\$ 67,382	\$ 72,367	N/A	\$ 52,350
Under Age 25									
Number Members	1,077		12	156	72	30	30	86	48
Average Salary	\$ 25,986		\$ 54,680	\$ 43,578	\$ 36,510	\$ 53,498	\$ 44,638	N/A	\$ 36,272
Ages 25-29									
Number Members	2,048		28	208	132	134	80	176	210
Average Salary	\$ 35,326		\$ 58,763	\$ 49,383	\$ 43,385	\$ 58,140	\$ 53,054	N/A	\$ 44,108
Ages 30-34									
Number Members	2,555		38	231	133	154	134	169	295
Average Salary	\$ 40,683		\$ 63,681	\$ 55,724	\$ 47,428	\$ 61,875	\$ 63,561	N/A	\$ 51,218
Ages 35-39									
Number Members	2,958	3	41	191	139	151	147	561	378
Average Salary	\$ 44,225	\$ 137,198	\$ 65,259	\$ 58,239	\$ 50,919	\$ 69,749	\$ 72,133	N/A	\$ 56,038
Ages 40-44									
Number Members	2,988	4	34	179	118	97	131	214	383
Average Salary	\$ 45,763	\$ 134,560	\$ 69,922	\$ 60,703	\$ 54,094	\$ 70,635	\$ 77,157	N/A	\$ 55,612
Ages 45-49									
Number Members	3,300	4	28	173	152	98	105	233	421
Average Salary	\$ 46,743	\$ 134,560	\$ 71,698	\$ 64,229	\$ 56,760	\$ 75,426	\$ 84,375	N/A	\$ 56,795
Ages 50-54									
Number Members	3,657	11	20	143	114	57	54	245	362
Average Salary	\$ 48,307	\$ 135,100	\$ 71,051	\$ 59,680	\$ 55,930	\$ 82,453	\$ 91,323	N/A	\$ 55,563
Ages 55-59									
Number Members	4,616	15	8	95	94	15	27	210	362
Average Salary	\$ 47,136	\$ 139,669	\$ 75,072	\$ 58,204	\$ 57,194	\$ 72,607	\$ 89,445	N/A	\$ 52,483
Ages 60-64									
Number Members	3,835	8	3	58	58	3	12	161	285
Average Salary	\$ 46,463	\$ 157,432	\$ 71,395	\$ 56,057	\$ 51,923	\$ 75,755	\$ 95,285	N/A	\$ 48,833
Ages 65-69									
Number Members	1,310	10	1	17	7	1	1	108	99
Average Salary	\$ 41,099	\$ 137,198	\$ 62,843	\$ 55,592	\$ 62,552	\$ 95,142	\$ 2,749	N/A	\$ 41,744
Age 70 & Over									
Number Members	548	3		3	2	1	1	82	28
Average Salary	\$ 30,405	\$ 141,704		\$ 41,495	\$ 50,918	\$ 118,680	\$ 85,504	N/A	\$ 22,481

¹ The number of members for HPORS and MPORS does not include DROP members.

² Average Salary is not applicable to VFCA, members are unpaid volunteers.

The last actuarial valuation was performed as of June 30, 2019.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retiree Member Composition

as of June 30, 2019

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	22,061	67	304	627	313	714	581	1,484
Average Age	72.6	75.6	70.1	65.5	66.5	66.7	69.3	71.7
Average Age at Retirement	60.9	64.8	50.7	54.7	57.8	50.2	52.8	60.1
Average Service at Retirement	20.2	17.0	24.0	19.0	17.1	19.9	24.8	27.3
Average Annual Benefit	\$ 18,876	\$ 56,296	\$ 36,105	\$ 28,434	\$ 22,566	\$ 32,341	\$ 40,531	\$ 2,007
Under Age 45								
Number Members	48			8		5	4	
Average Annual Benefit	\$ 6,631			\$ 32,602		\$ 29,533	\$ 40,359	
Ages 45-49								
Number Members	36		12	17		21	10	
Average Annual Benefit	\$ 15,306		\$ 35,854	\$ 34,386		\$ 40,290	\$ 37,572	
Ages 50-54								
Number Members	146		29	56	20	93	37	
Average Annual Benefit	\$ 23,314		\$ 39,828	\$ 28,284	\$ 30,191	\$ 27,864	\$ 33,854	
Ages 55-59								
Number Members	690	1	37	89	54	100	85	87
Average Annual Benefit	\$ 26,483	\$ 20,198	\$ 35,299	\$ 28,103	\$ 17,184	\$ 31,644	\$ 42,052	\$ 2,468
Ages 60-64								
Number Members	2,951	4	23	129	76	107	91	239
Average Annual Benefit	\$ 21,837	\$ 35,291	\$ 35,237	\$ 28,964	\$ 25,473	\$ 30,333	\$ 46,403	\$ 2,142
Ages 65-69								
Number Members	5,559	13	36	145	68	132	82	357
Average Annual Benefit	\$ 20,699	\$ 67,925	\$ 42,361	\$ 30,069	\$ 18,323	\$ 33,644	\$ 47,451	\$ 2,009
Ages 70-74								
Number Members	4,942	19	51	98	48	103	94	320
Average Annual Benefit	\$ 19,672	\$ 54,506	\$ 38,559	\$ 27,537	\$ 21,130	\$ 38,530	\$ 46,867	\$ 1,944
Ages 75-79								
Number Members	3,360	11	44	44	20	48	62	231
Average Annual Benefit	\$ 16,821	\$ 61,057	\$ 35,173	\$ 30,508	\$ 26,252	\$ 33,512	\$ 39,463	\$ 1,936
Ages 80 & Over								
Number Members	4,329	19	72	41	27	105	116	250
Average Annual Benefit	\$ 14,007	\$ 53,695	\$ 31,044	\$ 18,541	\$ 30,010	\$ 29,318	\$ 27,747	\$ 1,861

The last actuarial valuation was performed as of June 30, 2019.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Beneficiary Member Composition

as of June 30, 2019

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	507	5	12	24	10	32	19	3
Average Age	64.0	72.6	53.1	60.4	53.8	61.3	70.1	61.3
Average Service at Retirement	18.2	14.1	10.2	14.6	13.3	11.4	15.2	26.3
Average Annual Benefit	\$ 12,097	\$ 30,542	\$ 21,220	\$ 25,732	\$ 12,116	\$ 26,571	\$ 27,779	\$ 2,055
Under Age 45								
Number Members	60		3	4	3	5	2	
Average Annual Benefit	\$ 7,583		\$ 19,698	\$ 13,523	\$ 12,775	\$ 17,000	\$ 31,020	
Ages 45-49								
Number Members	22		3	5		2	1	
Average Annual Benefit	\$ 8,634		\$ 16,937	\$ 22,287		\$ 32,299	\$ 25,488	
Ages 50-54								
Number Members	28		1	1	1	2	1	1
Average Annual Benefit	\$ 8,410		\$ 6,617	\$ 46,556	\$ 3,722	\$ 30,503	\$ 32,948	\$ 2,190
Ages 55-59								
Number Members	57		2	2		2	2	1
Average Annual Benefit	\$ 11,610		\$ 18,177	\$ 49,241		\$ 26,230	\$ 22,800	\$ 1,785
Ages 60-64								
Number Members	75	1		2	2	5	1	
Average Annual Benefit	\$ 12,466	\$ 66,571		\$ 42,968	\$ 23,047	\$ 28,153	\$ 27,826	
Ages 65-69								
Number Members	86	1	1	3	2	2	1	
Average Annual Benefit	\$ 13,278	\$ 16,974	\$ 14,185	\$ 10,718	\$ 7,565	\$ 24,673	\$ 33,874	
Ages 70-74								
Number Members	67	2	1	3	2	5	3	1
Average Annual Benefit	\$ 13,891	\$ 17,243	\$ 50,952	\$ 34,203	\$ 8,944	\$ 31,460	\$ 33,963	\$ 2,190
Ages 75-79								
Number Members	47		1			3		
Average Annual Benefit	\$ 11,412		\$ 36,628			\$ 29,808		
Ages 80 & Over								
Number Members	65	1		4		6	8	
Average Annual Benefit	\$ 16,111	\$ 34,679		\$ 21,575		\$ 25,065	\$ 24,767	

The last actuarial valuation was performed as of June 30, 2019.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Disabled Member Composition

as of June 30, 2019

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA	PERS-DCRP
Total Count	146		6	29	4	32	10	1	10
Average Age	55.3		46.3	51.7	52.2	44.2	40.3	67.5	57.0
Average Age at Disablement	48.6		38.2	42.7	47.9	39.2	35.6	60.5	53.0
Average Service at Retirement	14.7		9.0	9.3	10.6	9.2	7.9	2.3	14.0
Average Annual Benefit	\$ 12,516		\$ 30,962	\$ 28,330	\$ 12,027	\$ 31,991	\$ 29,939	\$ 1,050	\$ 11,024
Under Age 45									
Number Members	4		2	4		15	7		
Average Annual Benefit	\$ 6,152		\$ 32,475	\$ 38,855		\$ 32,361	\$ 27,595		
Ages 45-49									
Number Members	13		4	7	3	15	3		2
Average Annual Benefit	\$ 11,183		\$ 30,206	\$ 26,287	\$ 10,358	\$ 32,371	\$ 35,409		\$ 12,093
Ages 50-54									
Number Members	34			7		2			3
Average Annual Benefit	\$ 12,705			\$ 30,494		\$ 26,374			\$ 9,762
Ages 55-59									
Number Members	92			11					2
Average Annual Benefit	\$ 12,739			\$ 24,425					\$ 13,296
Ages 60-64									
Number Members	3								2
Average Annual Benefit	\$ 17,786								\$ 13,021
Ages 65-69									
Number Members					1			1	1
Average Annual Benefit					\$ 17,033		\$ 1,050	\$ 4,132	
Ages 70-74									
Number Members									
Average Annual Benefit									
Ages 75-79									
Number Members									
Average Annual Benefit									
Ages 80 & Over									
Number Members									
Average Annual Benefit									

The last actuarial valuation was performed as of June 30, 2019.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Converted Disabled Member Composition

as of June 30, 2019

	PERS-DBRP	JRS	HPORS	SRS	GWPORS	MPORS	FURS	VFCA
Total Count	531	1	20	46	19	72	51	
Average Age	71.4	60.5	63.0	67.0	65.7	66.2	69.1	
Average Age at Disablement	51.4	57.1	44.9	47.3	52.3	42.5	44.5	
Average Service at Retirement	14.5	181.5	11.3	10.8	14.5	11.5	15.4	
Average Annual Benefit	\$ 11,583	\$ 63,588	\$ 27,717	\$ 23,151	\$ 20,603	\$ 26,902	\$ 29,497	
Under Age 45								
Number Members								
Average Annual Benefit								
Ages 45-49								
Number Members								
Average Annual Benefit								
Ages 50-54								
Number Members			3	2	1	13	6	
Average Annual Benefit			\$ 26,672	\$ 23,016	\$ 24,843	\$ 30,781	\$ 38,398	
Ages 55-59								
Number Members			6	2	4	10	4	
Average Annual Benefit			\$ 26,717	\$ 29,490	\$ 17,160	\$ 29,080	\$ 27,998	
Ages 60-64								
Number Members	130	1	3	17	5	10	6	
Average Annual Benefit	\$ 13,469	\$ 63,588	\$ 31,267	\$ 25,353	\$ 16,369	\$ 28,223	\$ 29,164	
Ages 65-69								
Number Members	140		3	13	4	13	10	
Average Annual Benefit	\$ 11,489		\$ 27,369	\$ 22,299	\$ 23,104	\$ 23,835	\$ 27,018	
Ages 70-74								
Number Members	103		2	8	3	11	14	
Average Annual Benefit	\$ 11,402		\$ 28,175	\$ 20,622	\$ 24,420	\$ 25,611	\$ 30,681	
Ages 75-79								
Number Members	83		3	1		6	4	
Average Annual Benefit	\$ 10,194		\$ 27,256	\$ 22,520		\$ 23,586	\$ 25,633	
Ages 80 & Over								
Number Members	75			3	2	9	7	
Average Annual Benefit	\$ 10,272			\$ 17,185	\$ 25,231	\$ 25,633	\$ 26,393	

The last actuarial valuation was performed as of June 30, 2019.

Converted disabilities include those members who are disabled, but have reached normal retirement age and are no longer recorded as disabled by MPERA.

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ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retirees and Beneficiaries

Added to and Removed from Rolls

	Added		Removed					Average Annual Benefit ³	% Benefit Increase/ Decrease
Year Ended	No.	Annual Benefits ¹	No.	Annual Benefits ¹	End of Year ⁴	Benefits ²			
PERS-DBRP									
June 30, 2019	1,304	\$ 38,000,460	615	\$ 11,418,582	23,245	\$ 422,444,896	\$	18,739	11.09%
June 30, 2018	1,403	37,846,436	652	9,454,423	22,556	395,338,673		16,869	-3.33%
June 30, 2017	1,312	31,596,750	840	9,548,655	21,805	366,354,719		17,450	-3.04%
June 30, 2016	1,318	19,195,422	666	4,630,708	21,333	344,103,875		17,997	6.21%
June 30, 2015	1,255	18,427,160	655	4,854,984	20,681	319,501,818		16,945	4.41%
June 30, 2014	1,226	15,851,006	596	4,376,529	20,081	296,183,076		16,230	4.21%
June 30, 2013	1,261	16,288,261	548	4,058,927	19,451	274,021,249		15,574	18.19%
June 30, 2012	1,220	16,262,411	605	4,117,597	18,738	252,762,398		13,177	-3.29%
June 30, 2011	1,169	15,407,952	558	3,428,851	18,123	231,222,603		13,625	8.35%
June 30, 2010	905	11,510,903	468	2,803,801	17,512	212,186,085		12,575	5.81%
JRS									
June 30, 2019	7	298,135	4	167,376	73	3,846,157		54,632	7.38%
June 30, 2018	5	501,241	3	325,448	70	3,723,271		50,875	-2.86%
June 30, 2017	5	261,004	5	119,595	68	3,554,335		52,372	-3.51%
June 30, 2016	5	319,842	4	71,398	68	3,416,023		54,279	8.33%
June 30, 2015	2	71,326	2	14,415	67	3,040,988		50,105	3.91%
June 30, 2014	3	171,535	1	65,592	67	3,022,512		48,221	2.31%
June 30, 2013	10	251,141	1	19,919	65	2,552,787		47,131	10.29%
June 30, 2012	0	94,034	2	36,651	56	2,344,170		42,733	3.57%
June 30, 2011	5	127,602	2	4,668	58	2,239,603		41,259	5.07%
June 30, 2010	1	129,486	1	4,668	55	2,118,121		39,269	6.06%
HPORS									
June 30, 2019	15	961,821	11	445,997	342	12,062,607		35,172	8.48%
June 30, 2018	19	879,739	12	336,121	338	11,545,732		32,424	-2.07%
June 30, 2017	23	673,416	21	171,465	331	11,036,794		33,109	-3.17%
June 30, 2016	13	371,167	11	61,783	329	10,482,414		34,193	4.55%
June 30, 2015	14	366,606	9	57,749	327	9,932,134		32,707	3.31%
June 30, 2014	17	408,119	5	32,946	322	9,344,441		31,658	4.16%
June 30, 2013	12	401,650	7	58,709	310	8,708,925		30,394	15.35%
June 30, 2012	5	197,432	2	18,356	305	8,223,433		26,349	-0.98%
June 30, 2011	12	294,280	5	75,122	302	7,865,745		26,611	7.45%
June 30, 2010	8	264,156	4	102,241	295	7,556,735		24,765	2.95%
SRS									
June 30, 2019	56	1,846,051	11	407,249	726	19,512,312		28,065	10.95%
June 30, 2018	42	1,633,338	9	332,445	681	18,052,544		25,295	-4.85%
June 30, 2017	39	1,429,635	11	310,474	648	16,700,117		26,583	-1.16%
June 30, 2016	54	1,008,978	11	114,283	620	15,476,437		26,896	3.50%
June 30, 2015	50	791,307	6	60,636	577	14,019,543		25,986	2.12%
June 30, 2014	35	643,063	5	26,764	533	12,732,103		25,446	2.07%
June 30, 2013	38	723,040	4	44,835	503	11,582,729		24,931	15.27%
June 30, 2012	32	599,749	4	20,148	469	10,379,424		21,628	-5.97%
June 30, 2011	30	701,530	4	50,832	441	9,237,286		23,001	9.36%
June 30, 2010	17	379,084	8	82,426	415	8,276,901		21,033	7.93%

¹These amounts are based on annual benefit totals which include lump sum death benefit payouts.

²Includes death benefit payments for active members.

³Based on June monthly benefit totals.

⁴For HPORS and MPORS, End of Year does not include DROP.

Due to MPORA's new computer system, beginning with FY2017, the amounts are calculated differently.

The last actuarial valuation was performed as of June 30, 2019.

Added			Removed						Average Annual Benefit ³	% Benefit Increase
Year Ended	No.	Annual Benefits ¹	No.	Annual Benefits ¹	End of Year ⁴	Benefits ²				
GWPOPS										
June 30, 2019	39	\$ 956,899	5	\$ 151,172	346	\$ 7,349,795	\$	22,513		14.64%
June 30, 2018	38	770,585	2	105,878	312	6,522,921		19,638		-11.54%
June 30, 2017	31	745,929	5	135,340	276	5,809,910		22,199		-2.77%
June 30, 2016	23	338,386	4	22,118	250	5,068,318		22,832		-2.02%
June 30, 2015	35	419,935	7	53,794	231	4,550,326		23,302		4.66%
June 30, 2014	26	283,359	3	21,306	203	3,979,269		22,265		1.49%
June 30, 2013	22	233,226	5	90,813	180	3,575,042		21,938		17.62%
June 30, 2012	19	235,722	1	22,860	163	3,202,597		18,652		-11.04%
June 30, 2011	12	146,846	3	16,761	145	2,863,434		20,967		4.61%
June 30, 2010	10	112,042	1	10,583	136	2,621,834		20,044		1.24%
MPORS										
June 30, 2019	45	1,961,332	7	898,114	850	26,220,684		31,701		7.70%
June 30, 2018	32	1,690,900	11	756,092	812	24,566,646		29,434		-2.59%
June 30, 2017	32	1,551,779	9	420,615	791	23,474,602		30,215		-0.47%
June 30, 2016	39	834,722	15	80,036	768	21,960,690		30,357		3.10%
June 30, 2015	43	877,021	15	125,552	744	20,560,131		29,443		2.08%
June 30, 2014	19	462,040	13	109,127	716	19,449,550		28,842		4.50%
June 30, 2013	40	883,350	13	153,027	710	18,462,730		27,601		8.10%
June 30, 2012	17	515,137	10	98,603	683	17,354,933		25,533		-1.02%
June 30, 2011	22	539,164	16	145,734	676	17,013,369		25,797		6.34%
June 30, 2010	34	559,746	10	77,537	670	15,727,576		24,260		2.81%
FURS										
June 30, 2019	19	2,199,976	10	611,402	661	25,626,191		39,215		11.53%
June 30, 2018	31	1,781,433	9	354,340	652	23,863,193		35,161		-3.37%
June 30, 2017	23	1,614,614	14	488,405	630	22,335,636		36,389		0.95%
June 30, 2016	26	761,390	14	95,141	621	20,896,200		36,047		1.38%
June 30, 2015	27	621,742	13	95,699	609	19,745,267		35,558		6.60%
June 30, 2014	26	705,387	18	101,960	595	18,871,929		33,356		3.87%
June 30, 2013	25	620,602	9	55,278	587	17,670,032		32,112		12.43%
June 30, 2012	21	696,096	2	9,065	571	16,519,146		28,563		-3.33%
June 30, 2011	19	624,623	13	172,927	552	15,605,138		29,546		8.17%
June 30, 2010	17	501,398	13	111,575	546	14,597,875		27,314		4.17%
VFCA										
June 30, 2019	72	170,647	58	104,169	1,488	2,996,808		2,028		3.29%
June 30, 2018	85	158,944	49	83,074	1,474	2,944,046		1,963		-2.44%
June 30, 2017	51	319,633	38	67,063	1,438	2,858,443		2,012		0.50%
June 30, 2016	92	268,898	38	41,145	1,425	2,623,011		2,002		13.55%
June 30, 2015	78	83,963	39	38,318	1,371	2,368,553		1,763		0.69%
June 30, 2014	77	81,473	30	26,715	1,332	2,280,876		1,751		0.16%
June 30, 2013	75	129,518	32	24,135	1,285	2,819,162		1,748		11.10%
June 30, 2012	87	104,535	28	19,440	1,242	2,046,233		1,574		-4.75%
June 30, 2011	76	84,810	42	32,985	1,183	1,938,060		1,652		1.52%
June 30, 2010	82	89,933	36	33,825	1,149	1,856,833		1,627		0.38%

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Solvency Test

(in thousands)

System	Valuation Date	Aggregate Accrued Liabilities for				Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3	Actuarial Value of Assets	1	2	3
		Active Member Accounts ¹	Retirees and Beneficiaries	Active Members (ER Financed Portion)				
PERS-DBRP	6/30/2019	\$ 898,554	\$ 5,028,352	\$ 2,030,132	\$ 5,903,191	100%	100%	0%
	6/30/2018	876,608	4,718,929	2,134,547	5,705,236	100	100	5
	6/30/2017	882,835	4,423,430	2,272,120	5,514,027	100	100	9
	6/30/2016	842,772	3,955,400	1,989,751	5,247,685	100	100	23
	6/30/2015	841,907	3,687,451	1,940,945	4,926,516	100	100	20
	6/30/2014	838,145	3,436,212	1,903,147	4,595,805	100	100	17
	6/30/2013	828,657	2,790,430	1,541,864	4,139,921	100	100	34
	6/30/2012	837,663	2,958,076	1,865,543	3,816,920	100	100	1
	6/30/2011	840,762	2,728,687	1,840,696	3,800,479	100	100	13
	6/30/2010	848,756	2,481,534	1,911,529	3,889,890	100	100	29
JRS	6/30/2019	4,174	43,861	17,040	104,918	100	100	334
	6/30/2018	4,329	39,714	18,698	101,192	100	100	306
	6/30/2017	4,372	38,351	15,380	97,066	100	100	353
	6/30/2016	4,494	35,673	14,587	91,152	100	100	350
	6/30/2015	4,667	33,210	14,024	84,934	100	100	336
	6/30/2014	4,623	32,776	13,201	78,463	100	100	311
	6/30/2013	4,733	31,709	12,795	70,323	100	100	265
	6/30/2012	5,575	24,631	15,985	63,195	100	100	206
	6/30/2011	5,115	24,692	13,607	61,274	100	100	231
	6/30/2010	5,207	22,279	15,027	61,277	100	100	225
HPORS	6/30/2019	13,070	185,306	38,429	152,851	100	75	0
	6/30/2018	12,976	175,574	41,271	147,144	100	76	0
	6/30/2017	12,288	163,885	43,297	141,236	100	79	0
	6/30/2016	12,535	146,267	44,524	133,869	100	83	0
	6/30/2015	12,102	133,628	47,252	125,676	100	85	0
	6/30/2014	11,507	126,478	45,416	117,226	100	84	0
	6/30/2013	11,339	117,914	46,341	105,736	100	80	0
	6/30/2012	11,455	110,876	45,493	96,655	100	77	0
	6/30/2011	10,795	107,035	37,911	95,274	100	79	0
	6/30/2010	10,369	102,450	38,359	97,204	100	85	0
SRS	6/30/2019	57,884	279,198	125,616	377,387	100	100	32
	6/30/2018	55,236	254,965	126,515	353,904	100	100	35
	6/30/2017	51,998	239,648	119,741	332,169	100	100	34
	6/30/2016	47,826	213,000	112,321	310,510	100	100	44
	6/30/2015	46,500	193,359	109,054	288,269	100	100	44
	6/30/2014	45,595	176,538	103,944	264,945	100	100	41
	6/30/2013	43,007	164,339	96,838	235,310	100	100	29
	6/30/2012	41,694	149,254	93,612	211,535	100	100	22
	6/30/2011	40,737	135,189	90,579	203,689	100	100	31
	6/30/2010	39,841	117,422	89,470	200,739	100	100	49

¹Active Member Accounts include regular and additional contributions with interest, and excludes all accounts of inactive members.

The last actuarial valuation was performed as of June 30, 2019.

System	Valuation Date	Aggregate Accrued Liabilities for				Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3	Actuarial Value of Assets	1	2	3
		Active Member Accounts ¹	Retirees and Beneficiaries	Active Members (ER Financed Portion)				
GWPORS	6/30/2019	\$ 41,429	\$ 100,024	\$ 103,677	\$ 206,504	100%	100%	63%
	6/30/2018	39,605	88,621	101,851	190,849	100	100	61
	6/30/2017	39,205	77,897	100,540	176,311	100	100	59
	6/30/2016	36,111	65,912	88,984	160,555	100	100	66
	6/30/2015	34,396	58,648	79,116	145,314	100	100	66
	6/30/2014	32,779	50,062	71,753	129,429	100	100	65
	6/30/2013	31,918	43,498	64,569	112,100	100	100	57
	6/30/2012	29,975	39,856	59,095	97,691	100	100	47
	6/30/2011	28,468	35,166	56,247	90,437	100	100	48
	6/30/2010	26,592	32,383	54,880	85,151	100	100	48
MPORS	6/30/2019	43,542	397,171	197,153	441,565	100	100	0
	6/30/2018	43,686	374,355	193,014	413,608	100	99	0
	6/30/2017	42,364	346,374	173,832	386,259	100	99	0
	6/30/2016	38,543	308,635	171,768	356,985	100	100	6
	6/30/2015	37,193	297,235	162,758	328,025	100	98	0
	6/30/2014	36,950	276,306	161,052	298,722	100	95	0
	6/30/2013	34,778	267,540	147,725	262,678	100	85	0
	6/30/2012	34,687	248,260	144,310	234,025	100	80	0
	6/30/2011	32,906	239,176	129,298	221,669	100	79	0
	6/30/2010	30,986	229,057	120,350	217,545	100	81	0
FURS	6/30/2019	49,752	371,528	157,823	463,085	100	100	26
	6/30/2018	45,908	353,334	148,999	429,095	100	100	20
	6/30/2017	44,351	331,701	146,236	397,633	100	100	15
	6/30/2016	43,046	292,423	131,203	365,259	100	100	23
	6/30/2015	41,278	274,505	126,051	333,629	100	100	14
	6/30/2014	38,805	260,538	119,670	300,949	100	100	1
	6/30/2013	36,441	248,723	111,606	263,483	100	91	0
	6/30/2012	34,790	235,553	106,868	233,121	100	84	0
	6/30/2011	33,089	219,842	102,257	219,959	100	85	0
	6/30/2010	31,422	207,715	96,326	213,755	100	88	0
VFCA	6/30/2019		25,295	21,905	40,009	N/A	100	67
	6/30/2018		25,061	21,245	38,321	N/A	100	62
	6/30/2017		24,509	21,363	36,955	N/A	100	58
	6/30/2016		22,884	21,126	35,302	N/A	100	59
	6/30/2015		22,161	22,157	33,405	N/A	100	51
	6/30/2014		18,888	19,088	31,281	N/A	100	65
	6/30/2013		18,612	19,218	28,294	N/A	100	50
	6/30/2012		17,465	18,681	26,531	N/A	100	49
	6/30/2011		16,483	18,712	26,183	N/A	100	52
	6/30/2010		15,846	18,665	26,575	N/A	100	57

Active member accounts are not applicable. Members are unpaid volunteers.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Solvency Test¹

(in thousands)

System	Valuation Date ²	Aggregate Accrued Liabilities for				Portion of Accrued Liabilities Covered by Reported Asset		
		1	2	3	Actuarial Value of Assets	1	2	3
		Active Member Accounts	Disabled Members	Active Members (ER Financed Portion)				
PERS-DCRP	6/30/2019	N/A	\$ 822	\$ 4,074	\$ 5,137	100%	100%	106%
DISABILITY	6/30/2018	N/A	507	3,847	4,455	100	100	103
OPEB	6/30/2017	N/A	215	3,752	3,457	100	100	86
	6/30/2016	N/A	401	3,190	3,118	100	100	85
	6/30/2015	N/A	405	2,830	2,781	100	100	84
	6/30/2013	N/A	294	2,421	2,184	100	100	78

¹ This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

² The actuarial valuation for the PERS-DCRP Disability OPEB is performed on an annual basis. There were two years between the first two valuations due to the timing of the first valuation.

The last actuarial valuation was performed as of June 30, 2019.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Funding Progress for PERS-OPEB DCRP Disability OPEB¹

(in thousands)

System	Actuarial Valuation Date ²	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio %	Covered Payroll	UAAL as a Percentage of Covered Payroll
PERS-DCRP DISABILITY OPEB	6/30/2019	\$ 5,137	\$ 4,896	\$ (241)	104.93%	\$ 149,924	(0.16)%
	6/30/2018	4,455	4,354	(101)	102.32	139,066	(0.07)
	6/30/2017	3,457	3,967	510	87.14	129,158	0.39
	6/30/2016	3,118	3,591	473	86.83	114,883	0.41
	6/30/2015	2,781	3,235	454	85.97	113,750	0.40
	6/30/2013	2,184	2,715	531	80.44	90,128	0.59

¹ This schedule is intended to show 10 years of information. Additional years will be displayed as they become available.

² The actuarial valuation for the PERS-DCRP Disability OPEB is performed on an annual basis. There were two years between the first two valuations due to the timing of the first valuation.

The last actuarial valuation was performed as of June 30, 2019.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Funding Progress

(in thousands)

System	Actuarial Valuation Date	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio % (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
PERS-DBRP	6/30/2019	\$ 5,903,191	\$ 7,957,038	\$ 2,053,847	74.19%	\$ 1,247,344	164.66%
	6/30/2018	5,705,236	7,730,084	2,024,848	73.81	1,230,105	164.61
	6/30/2017	5,514,027	7,578,385	2,064,358	72.76	1,232,067	167.55
	6/30/2016	5,247,685	6,787,923	1,540,238	77.31	1,185,646	129.91
	6/30/2015	4,926,516	6,470,303	1,543,787	76.14	1,154,867	133.68
	6/30/2014	4,595,805	6,177,505	1,581,700	74.40	1,129,109	140.08
	6/30/2013	4,139,921	5,160,951	1,021,030	80.22	1,104,000	92.48
	6/30/2012	3,816,920	5,661,281	1,844,361	67.42	1,081,288	170.57
	6/30/2011	3,800,479	5,410,144	1,609,665	70.25	1,071,376	150.24
	6/30/2010	3,889,890	5,241,819	1,351,929	74.21	1,083,780	124.74
JRS	6/30/2019	104,918	65,075	(39,843)	161.23	7,382	(539.73)
	6/30/2018	101,192	62,741	(38,451)	161.29	7,291	(527.38)
	6/30/2017	97,066	58,104	(38,962)	167.06	6,974	(558.68)
	6/30/2016	91,152	54,754	(36,398)	166.48	6,920	(525.99)
	6/30/2015	84,934	51,901	(33,033)	163.65	6,525	(506.26)
	6/30/2014	78,463	50,600	(27,863)	155.07	6,355	(438.47)
	6/30/2013	70,323	49,236	(21,087)	142.82	6,276	(336.00)
	6/30/2012	63,195	46,190	(17,005)	136.81	6,193	(274.60)
	6/30/2011	61,274	43,414	(17,860)	141.13	5,645	(316.38)
	6/30/2010	61,277	42,513	(18,765)	144.13	5,687	(329.95)
HPORS	6/30/2019	152,851	236,805	83,954	64.55	15,178	553.13
	6/30/2018	147,144	229,822	82,678	64.03	15,251	542.12
	6/30/2017	141,236	219,470	78,234	64.35	14,779	529.36
	6/30/2016	133,869	203,326	69,457	65.84	15,276	454.68
	6/30/2015	125,676	192,983	67,307	65.12	14,549	462.62
	6/30/2014	117,226	183,400	66,174	63.92	14,149	467.69
	6/30/2013	105,736	175,594	69,858	60.22	13,484	518.08
	6/30/2012	96,655	167,824	71,169	57.59	13,618	522.62
	6/30/2011	95,274	155,742	60,468	61.17	12,472	484.83
	6/30/2010	97,204	151,177	53,973	64.30	13,036	414.03
SRS	6/30/2019	377,387	462,698	85,311	81.56	80,461	106.03
	6/30/2018	353,904	436,715	82,811	81.04	77,587	106.73
	6/30/2017	332,169	411,387	79,218	80.74	74,581	106.22
	6/30/2016	310,510	373,146	62,636	83.21	70,593	88.73
	6/30/2015	288,269	348,912	60,643	82.62	68,046	89.12
	6/30/2014	264,945	326,077	61,132	81.25	64,673	94.53
	6/30/2013	235,310	304,185	68,875	77.36	61,467	112.05
	6/30/2012	211,535	284,559	73,024	74.34	59,583	122.56
	6/30/2011	203,689	266,506	62,817	76.43	57,041	110.12
	6/30/2010	200,739	246,734	45,995	81.36	54,681	84.11

Expressing actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the plan's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the plan is becoming financially stronger or weaker. Generally, the greater the funded ratio, the stronger the plan.

¹ Refer to the "Notes to the Required Supplementary Information" for the Actuarial Asset Valuation Method (Page 124).

System	Actuarial Valuation Date	Actuarial Value of Assets ¹ (a)	Actuarial Accrued Liability (AAL) -Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio % (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
GWPORS	6/30/2019	\$ 206,504	\$ 245,130	\$ 38,626	84.24%	\$ 51,677	74.75%
	6/30/2018	190,849	230,077	39,228	82.95	50,823	77.19
	6/30/2017	176,311	217,642	41,331	81.01	49,381	83.70
	6/30/2016	160,555	191,007	30,452	84.06	47,108	64.64
	6/30/2015	145,314	172,160	26,846	84.41	44,885	59.81
	6/30/2014	129,429	154,595	25,166	83.72	41,637	60.44
	6/30/2013	112,100	139,985	27,885	80.08	39,471	70.65
	6/30/2012	97,691	128,927	31,236	75.77	38,317	81.52
	6/30/2011	90,437	119,881	29,444	75.44	38,306	76.87
	6/30/2010	85,151	113,855	28,704	74.79	39,436	72.79
MPORS	6/30/2019	441,565	637,866	196,300	69.23	54,282	361.63
	6/30/2018	413,608	611,056	197,448	67.69	52,036	379.44
	6/30/2017	386,259	562,570	176,311	68.66	48,604	362.75
	6/30/2016	356,985	518,946	161,961	68.79	47,234	342.90
	6/30/2015	328,025	497,186	169,161	65.98	45,736	369.87
	6/30/2014	298,722	474,308	175,586	62.98	44,427	395.23
	6/30/2013	262,678	450,043	187,365	58.37	42,796	437.81
	6/30/2012	234,025	427,257	193,232	54.77	41,745	462.89
	6/30/2011	221,669	401,381	179,712	55.23	39,470	455.30
	6/30/2010	217,545	380,393	162,848	57.19	37,220	437.52
FURS	6/30/2019	463,085	579,103	116,018	79.97	50,756	228.58
	6/30/2018	429,095	548,241	119,146	78.27	47,935	248.56
	6/30/2017	397,633	522,288	124,655	76.13	45,208	275.74
	6/30/2016	365,259	466,671	101,412	78.27	43,119	235.19
	6/30/2015	333,629	441,834	108,205	75.51	41,627	259.94
	6/30/2014	300,949	419,013	118,064	71.82	39,892	295.96
	6/30/2013	263,483	396,769	133,286	66.41	37,963	351.10
	6/30/2012	233,121	377,211	144,090	61.80	36,177	398.30
	6/30/2011	219,959	355,188	135,229	61.93	34,852	388.01
	6/30/2010	213,755	335,463	121,708	63.72	33,339	365.06
VFCA	6/30/2019	40,009	47,200	7,191	84.76	N/A	N/A
	6/30/2018	38,321	46,306	7,984	82.76	N/A	N/A
	6/30/2017	36,955	45,871	8,917	80.56	N/A	N/A
	6/30/2016	35,302	44,010	8,708	80.21	N/A	N/A
	6/30/2015	33,405	44,318	10,913	75.38	N/A	N/A
	6/30/2014	31,281	37,975	6,694	82.37	N/A	N/A
	6/30/2013	28,294	37,830	9,536	74.79	N/A	N/A
	6/30/2012	26,531	36,146	9,615	73.40	N/A	N/A
	6/30/2011	26,183	35,195	9,012	74.39	N/A	N/A
	6/30/2010	26,576	34,512	7,936	77.01	N/A	N/A

Covered payroll is not applicable to VFCA because members are unpaid volunteers.

ACTUARIAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Actuarial (Gain)/Loss by Source

(in thousands, except VFCA)

	PERS DBRP	JRS	HPORS	SRS
Investment (Gain) or Loss	\$ 33,324.9	\$ 431.0	\$ 677.8	\$ 1,458.6
Liability (Gain) or Loss				
Salary (Gain) or Loss	(13,284.6)	(478.6)	(911.3)	139.8
Retirement (Gain) or Loss	(101,219.5)	338.3	385.9	4,117.7
Disability (Gain) or Loss	703.2	(5.4)	271.1	319.0
Death In-Service (Gain) or Loss	(685.1)	(43.1)	(32.2)	(91.1)
Withdrawal (Gain) or Loss	54,238.1		(122.4)	(354.9)
Death after Retirement (Gain) or Loss	(14,261.5)	(12.2)	(188.1)	(2,442.0)
New Participant / Data Adjustment	32,214.9	(42.2)	(390.4)	408.6
Other (Gain) or Loss	8,284.5	(4.8)	60.1	17.1
Total Actuarial (Gain) or Loss	\$ (685.1)	\$ 183.0	\$ (249.5)	\$ 3,572.8

	GWPORS	MPORS	FURS	VFCA
Investment (Gain) or Loss	\$ 709.9	\$ 2,458.2	\$ 2,501.3	\$ 274,139
Liability (Gain) or Loss				
Salary (Gain) or Loss	(1,885.9)	2,854.7	2,843.4	
Retirement (Gain) or Loss	581.7	(1,829.4)	13.3	(656,706)
Disability (Gain) or Loss	(16.8)	2,176.2	669.7	
Death In-Service (Gain) or Loss	(31.5)	(196.4)	(227.7)	29,375
Withdrawal (Gain) or Loss	74.3	(82.2)	644.4	564,890
Death after Retirement (Gain) or Loss	(560.7)	(1,606.1)	(1,077.5)	(159,387)
New Participant / Data Adjustment	(44.3)	(2,099.1)	334.6	598,013
Other (Gain) or Loss	(7.8)	(166.3)	(6.5)	(11,354)
Total Actuarial (Gain) or Loss	\$ (1,181.1)	\$ 1,509.6	\$ 5,695.0	\$ 638,970

The last actuarial valuation was performed as of June 30, 2019.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Summary of Actuarial (Gain)/Loss by Source

	PERS-DCRP Disability OPEB
Investment (Gain) or Loss	\$ (151,842)
Liability (Gain) or Losses:	
Salary (Gain) or Loss	(7,339)
Retirement (Gain) or Loss	(17,985)
Disability (Gain) or Loss	184,693
Death In-Service (Gain) or Loss	6,087
Withdrawal (Gain) or Loss	(13,958)
Death after Retirement (Gain) or Loss	(106,725)
New Participant /Data Adjustment (Gain) or Loss	40,856
Other (Gain) or Loss	
Total Actuarial (Gain) or Loss	\$ (66,213)

The last actuarial valuation was performed as of June 30, 2019.

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STATISTICAL SECTION

Summary of Statistical Data

The Statistical Section contains more detailed information regarding financial viability and pension benefit offerings. The information is provided for the last ten fiscal years ending June 30, 2019.

Financial Trends

The following schedules contain trend information to help the reader understand how the plans' financial performance and well-being have changed over time.

- *Schedule of Changes in Fiduciary Net Position, Last Ten Fiscal Years*
- *History of Actuarial Liabilities*: The existence of unfunded actuarial liabilities in this schedule is not necessarily an indication of financial problems but the trends are important and must be monitored and controlled.

Revenue Capacity

The following schedules contain information to help the reader assess the plans' revenue sources, fair values by investment type, and contribution rate history since inception.

- *Schedule of Fair Market Values by Type of Investment*
- *Schedule of Contribution Rate History*

The *History of Membership in the Retirement Plans* provides the membership in the defined benefit plans for a 10-year period.

Debt Capacity

The following schedules present information to help the reader assess the plans' current levels of outstanding debt and the plans' ability to issue additional debt in the future. Debt capacity is represented with benefit expenses and distributions and is followed by schedules of retired members, based on the type of benefit received.

- *Schedule of Benefit Expenses and Refunds by Type*
- *Schedule of Distributions Processed (Defined Contribution Plan)*
- *Retired Members by Type of Benefit*

Demographic and Economic Information

These schedules offer demographic and economic indicators to help the reader understand the environment within which the plans' financial activities take place.

- *Schedule of Active Members by Age and Gender*
- *Schedule of Retired Members by Age and Gender*
- *Average Benefit Payments*
- *Schedule of Average Monthly Benefit Payments, All Retirees*

Operating Information

These schedules contain pension plan data to help the reader understand how the information in the financial report relates to the pension plans the PERB administers.

- *Principal Participating Employers*
- *Schedule of Participating Employers* for all plans.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years

(In thousands)

Fiscal Year	2019	2018	2017	2016	2015
PERS-DBRP					
Additions					
Employer Contributions ¹	\$ 107,751	\$ 107,142	\$ 103,902	\$ 102,810	\$ 100,625
Member Contributions ²	101,713	102,075	100,768	97,343	95,424
State Contributions	1,027	1,024	896	957	919
Investment Income ³	320,938	478,731	591,539	101,213	225,111
Other ⁴	33,615	33,635	27,861	29,843	33,547
Total Additions to Net Position	565,044	722,607	824,966	332,166	455,626
Deductions					
Benefits	422,445	395,339	366,355	344,104	319,502
Refunds	12,361	12,619	12,252	10,379	11,688
Administrative Expenses ⁵	4,648	4,998	5,225	4,261	3,980
Other ⁴	2,609	2,993	1,621	1,501	2,211
Total Deductions to Net Position	442,063	415,949	385,453	360,245	337,381
Change in Net Position	\$ 122,981	\$ 306,658	\$ 439,513	\$ (28,079)	\$ 118,245
PERS-DCRP DISABILITY OPEB⁶					
Additions					
Employer Contributions	\$ 465	\$ 431	\$ 392	\$ 368	\$ 343
Investment Income ³	314	288	333	11	4
Total Additions to Net Position	779	719	725	379	347
Deductions					
Benefits	97	52	54	42	34
Administrative Expenses					1
Total Deductions to Net Position	97	52	54	42	35
Change in Net Position	\$ 682	667	671	337	312
JRS					
Additions					
Employer Contributions		\$ 1,085	\$ 1,800	\$ 1,807	\$ 1,684
Member Contributions ²	517	575	488	729	534
Investment Income ³	5,687	8,469	10,370	1,779	3,842
Total Additions to Net Position	6,204	10,129	12,658	4,315	6,060
Deductions					
Benefits	3,846	3,723	3,554	3,416	3,041
Refunds		149			
Administrative Expenses ⁵	123	265	255	200	138
Other ⁴					
Total Deductions to Net Position	3,969	4,137	3,809	3,616	3,179
Change in Net Position	\$ 2,235	\$ 5,992	\$ 8,849	\$ 699	\$ 2,881

Contributions were made in accordance with statutory requirements.

¹ Includes Membership Fees, Retirement Incentive, Miscellaneous Revenue, and Education Contributions.

² Includes Interest Reserve Buybacks.

³ Includes Common Stock Dividends.

⁴ Includes Transfers to the DC, MUS-RP, Refunds to Other Plans, Coal Tax Transfers prior to FY2018, and State Appropriation FY2018 and after.

⁵ Includes OPEB Expenses

⁶ Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a Defined Benefit Plan.

2014	2013	2012	2011	2010
\$ 129,921	\$ 81,836	\$ 80,049	\$ 79,173	\$ 80,326
92,160	80,889	79,332	77,875	78,671
886	532	536	546	537
732,483	505,052	91,355	715,398	387,861
955,450	668,309	251,272	872,992	547,395
296,183	274,021	252,762	231,223	212,186
10,070	11,254	11,991	11,539	10,967
3,781	3,843	3,386	3,327	3,257
1,488	1,594	1,028	794	3,438
311,522	290,712	269,167	246,883	229,848
\$ 643,928	\$ 377,597	\$ (17,895)	\$ 626,109	\$ 317,547
\$ 311	\$ 288	\$ 273	\$ 262	\$ 265
3	5	5	5	4
314	293	278	267	269
29	29	27	19	14
29	29	27	19	14
\$ 285	\$ 264	\$ 251	\$ 248	\$ 255
\$ 1,652	\$ 1,621	\$ 1,598	\$ 1,477	\$ 1,468
481	742	447	504	595
12,425	8,409	1,517	11,392	6,013
14,558	10,772	3,562	13,373	8,076
3,023	2,553	2,344	2,240	2,118
100	185	118	39	10
				24
3,123	2,738	2,462	2,279	2,152
\$ 11,435	\$ 8,034	\$ 1,100	\$ 11,094	\$ 5,924

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years (cont.)

(In thousands)

Fiscal Year	2019	2018	2017	2016	2015
HPORS					
Additions					
Employer Contributions ¹	\$ 5,845	\$ 5,858	\$ 5,782	\$ 5,916	\$ 5,578
Member Contributions ²	2,002	2,387	1,950	1,917	1,624
State Contributions ³	233	250	263	243	262
Investment Income ⁴	8,269	12,283	15,101	2,605	5,738
Total Additions to Net Position	16,349	20,778	23,096	10,681	13,202
Deductions					
Benefits	12,063	11,546	11,037	10,482	9,932
Refunds	582	322	245	94	69
Administrative Expenses ⁵	127	256	248	199	146
Other ⁶					
Total Deductions to Net Position	12,772	12,124	11,530	10,775	10,147
Change in Net Position	\$ 3,577	\$ 8,654	\$ 11,566	\$ (94)	\$ 3,055
SRS					
Additions					
Employer Contributions ¹	\$ 10,573	\$ 10,366	\$ 7,562	\$ 7,317	\$ 6,902
Member Contributions ²	8,616	8,469	7,189	6,982	6,623
Investment Income ⁴	20,396	29,158	35,516	6,064	13,042
Total Additions to Net Position	39,585	47,993	50,267	20,363	26,567
Deductions					
Benefits	19,512	18,053	16,700	15,476	14,019
Refunds	1,439	1,490	1,383	1,029	1,217
Administrative Expenses ⁵	247	432	388	326	250
Other ⁶	45	64	33	75	44
Total Deductions to Net Position	21,243	20,039	18,504	16,906	15,530
Change in Net Position	\$ 18,342	\$ 27,954	\$ 31,763	\$ 3,457	\$ 11,037
GWPORS					
Additions					
Employer Contributions ¹	\$ 4,686	\$ 4,613	\$ 4,464	\$ 4,278	\$ 4,088
Member Contributions ²	5,566	5,512	5,278	5,036	4,924
Investment Income ⁴	11,125	15,573	18,592	3,167	6,435
Total Additions to Net Position	21,377	25,698	28,334	12,481	15,447
Deductions					
Benefits	7,350	6,523	5,810	5,068	4,550
Refunds	1,001	1,105	1,036	1,066	802
Administrative Expenses ⁵	202	369	329	272	203
Other ⁶	(1)	31		28	
Total Deductions to Net Position	8,552	8,028	7,175	6,434	5,555
Change in Net Position	\$ 12,825	\$ 17,670	\$ 21,159	\$ 6,047	\$ 9,892

Contributions were made in accordance with statutory requirements.

¹ Includes Retirement Incentive and Miscellaneous Revenue.

² Includes Interest Reserve Buybacks.

³ Includes Percent of Salary.

⁴ Includes Common Stock Dividends.

⁵ Includes OPEB Expenses.

⁶ Includes Refunds to Other Plans.

2014	2013	2012	2011	2010
\$ 5,474	\$ 4,903	\$ 4,966	\$ 4,543	\$ 4,763
1,458	1,337	1,299	1,270	1,262
262	274	269	278	287
18,684	12,826	2,321	17,912	9,714
25,878	19,340	8,855	24,003	16,026
9,344	8,709	8,223	7,866	7,557
84	51	65	121	56
109	181	122	56	35
15		3		37
9,552	8,941	8,413	8,043	7,685
\$ 16,326	\$ 10,399	\$ 442	\$ 15,960	\$ 8,341
\$ 6,690	\$ 6,273	\$ 6,028	\$ 6,014	\$ 5,637
6,447	5,838	5,694	5,831	5,336
41,802	28,154	5,109	37,539	19,470
54,939	40,265	16,831	49,384	30,443
12,732	11,583	10,379	9,237	8,277
1,185	1,159	1,248	968	766
203	287	207	121	97
27	25	23		116
14,147	13,054	11,857	10,326	9,256
\$ 40,792	\$ 27,211	\$ 4,974	\$ 39,058	\$ 21,187
\$ 3,762	\$ 3,576	\$ 3,470	\$ 3,523	\$ 3,612
4,462	4,210	4,148	4,198	4,340
20,075	13,106	2,388	16,335	7,924
28,299	20,892	10,006	24,056	15,876
3,979	3,575	3,203	2,863	2,622
1,187	841	1,227	993	879
161	247	173	88	61
63	23	15		59
5,390	4,686	4,618	3,944	3,621
\$ 22,909	\$ 16,206	\$ 5,388	\$ 20,112	\$ 12,255

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years (cont.)

(In thousands)

Fiscal Year	2019	2018	2017	2016	2015
MPORS					
Additions					
Employer Contributions ¹	\$ 7,853	\$ 7,758	\$ 7,091	\$ 6,928	\$ 6,630
Member Contributions ²	5,038	5,046	4,465	4,384	4,292
State Contributions ³	15,990	15,840	13,961	13,751	13,433
Investment Income ⁴	22,636	33,238	39,781	7,113	14,471
Total Additions to Net Position	51,517	61,882	65,298	32,176	38,826
Deductions					
Benefits	26,221	24,567	23,475	21,961	20,560
Refunds	3,637	2,675	1,043	1,240	2,179
Administrative Expenses ⁵	190	350	340	276	214
Other ⁶	14	53		129	5
Total Deductions to Net Position	30,062	27,645	24,858	23,606	22,958
Change in Net Position	\$ 21,455	\$ 34,237	\$ 40,440	\$ 8,570	\$ 15,868
FURS					
Additions					
Employer Contributions ¹	\$ 7,324	\$ 7,053	\$ 6,501	\$ 6,163	\$ 6,100
Member Contributions ²	5,527	5,315	4,925	4,752	4,710
State Contributions ³	16,567	16,127	14,438	13,970	13,573
Investment Income ⁴	23,722	34,285	40,844	7,312	14,640
Total Additions to Net Position	53,140	62,780	66,708	32,197	39,023
Deductions					
Benefits	25,626	23,863	22,336	20,896	19,745
Refunds	90	173	168	46	2
Administrative Expenses ⁵	171	329	321	262	192
Other ⁶					
Total Deductions to Net Position	25,887	24,365	22,825	21,204	19,939
Change in Net Position	\$ 27,253	\$ 38,415	\$ 43,883	\$ 10,993	\$ 19,084
VFCA					
Additions					
State Contributions	\$ 2,370	\$ 2,212	\$ 2,065	\$ 2,036	\$ 1,914
Investment Income ⁴	2,071	3,127	3,837	622	1,480
Total Additions to Net Position	4,441	5,339	5,902	2,658	3,394
Deductions					
Benefits	2,997	2,944	2,858	2,623	2,369
Insurance Payments	11	11	6	12	11
Administrative Expenses ⁵	297	293	290	244	182
Other ⁶					
Total Deductions to Net Position	3,305	3,248	3,154	2,879	2,562
Change in Net Position	\$ 1,136	\$ 2,091	\$ 2,748	\$ (221)	\$ 832

Contributions were made in accordance with statutory requirements.

¹ Includes Miscellaneous Revenue.

² Includes Interest Reserve Buybacks.

³ Includes Percent of Salary.

⁴ Includes Common Stock Dividends.

⁵ Includes OPEB Expenses.

⁶ Includes Refunds to Other Plans.

2014	2013	2012	2011	2010
\$ 6,459	\$ 6,280	\$ 3,791	\$ 5,670	\$ 6,860
4,133	4,029	6,055	3,580	4,141
13,049	12,573	12,274	11,594	10,932
45,244	30,037	5,717	39,175	19,972
68,885	52,919	27,837	60,019	41,905
19,450	18,463	17,355	17,013	15,728
1,018	1,833	707	1,000	849
166	245	178	106	80
60	5	3		149
20,694	20,546	18,243	18,119	16,806
\$ 48,191	\$ 32,373	\$ 9,594	\$ 41,900	\$ 25,099
\$ 5,767	\$ 5,499	\$ 5,281	\$ 5,009	\$ 5,129
4,698	4,253	4,123	3,748	4,419
13,007	12,358	11,797	11,365	10,872
45,478	30,035	5,726	38,751	19,606
68,950	52,145	26,927	58,873	40,026
18,872	17,670	16,519	15,605	14,598
166	73	119	128	86
153	229	163	92	72
14				85
19,205	17,972	16,801	15,825	14,841
\$ 49,745	\$ 34,173	\$ 10,126	\$ 43,048	\$ 25,185
\$ 1,818	\$ 1,711	\$ 1,635	\$ 1,596	\$ 1,575
4,817	3,383	592	4,793	2,566
6,635	5,094	2,227	6,389	4,141
2,281	2,819	2,046	1,938	1,857
14	15	13	15	17
135	206	144	81	58
				9
2,430	3,040	2,203	2,034	1,941
\$ 4,205	\$ 2,054	\$ 24	\$ 4,355	\$ 2,200

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Changes in Fiduciary Net Position, Last Ten Fiscal Years (cont.)

(In thousands)

Fiscal Year	2019	2018	2017	2016	2015
PERS-DCRP					
Additions					
Employer Contributions ¹	\$ 13,061	\$ 11,899	\$ 10,752	\$ 6,494	\$ 4,887
Member Contributions	13,505	12,447	11,828	9,970	9,369
Investment Income ²	17,962	19,602	22,368	1,428	6,316
Other ³	837	909	465	1,035	422
<i>Total Additions to Net Position</i>	45,365	44,857	45,413	18,927	20,994
Deductions					
Refunds	9,022	9,746	7,038	5,299	6,103
Administrative Expenses ⁴	634	754	836	671	586
Other ⁵	284	267	225	164	198
<i>Total Deductions to Net Position</i>	9,940	10,767	8,099	6,134	6,887
<i>Change in Net Position</i>	\$ 35,425	\$ 34,090	\$ 37,314	\$ 12,793	\$ 14,107
DEFERRED COMPENSATION PLAN					
Additions					
Employer Contributions ¹	\$ 120	\$ 93	\$ 77	\$ 63	\$ 103
Member Contributions	23,567	22,850	23,770	21,916	20,379
Investment Income ²	36,659	29,293	35,889	7,308	11,243
Other ⁶	567	600	587	195	263
<i>Total Additions to Net Position</i>	60,913	52,836	60,323	29,482	31,988
Deductions					
Refunds	28,926	29,303	27,329	20,193	24,219
Administrative Expenses ⁴	427	565	621	521	451
Other ⁵	875	898	846	427	457
<i>Total Deductions to Net Position</i>	30,228	30,766	28,796	21,141	25,127
<i>Change in Net Position</i>	\$ 30,685	\$ 22,070	\$ 31,527	\$ 8,341	\$ 6,861

¹ Includes Percent of Salary and State Contributions.

² Fees paid to Transamerica, PIMCO, Voya, Prudential and State Street are included in the net investment sum.

³ Includes Miscellaneous Revenues and Forfeitures remitted to MPERA to pay administrative costs.

⁴ Includes OPEB Expenses.

⁵ Fees paid to Empower for services provided.

⁶ Miscellaneous Revenue remitted to MPERA to pay administrative costs.

	2014		2013		2012		2011		2010
\$	4,410	\$	4,374	\$	4,137	\$	3,965	\$	4,029
	8,534		6,943		6,318		6,100		6,140
	18,367		11,684		2,352		12,698		6,122
	292		451		616		698		487
	31,603		23,452		13,423		23,461		16,778
	4,738		4,379		4,000		3,637		1,947
	558		585		493		426		416
	174		162		313		299		250
	5,470		5,126		4,806		4,362		2,613
\$	26,133	\$	18,326	\$	8,617	\$	19,099	\$	14,165
\$	81	\$	79	\$	65	\$	64	\$	61
	24,255		20,297		19,381		19,072		18,607
	35,165		21,219		13,913		36,906		37,203
	191		257		628		424		330
	59,692		41,852		33,987		56,466		56,201
	24,250		19,644		15,637		15,416		13,398
	406		445		357		288		277
	458		581		1,186		1,007		991
	25,114		20,670		17,180		16,711		14,666
\$	34,578	\$	21,182	\$	16,807	\$	39,755	\$	41,535

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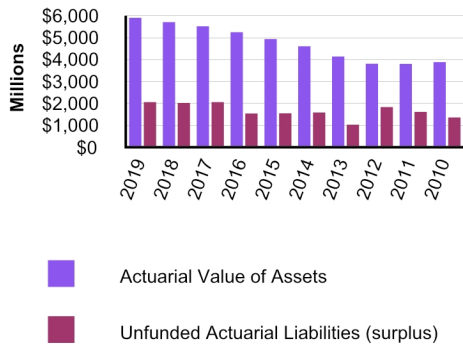
Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Actuarial Liabilities

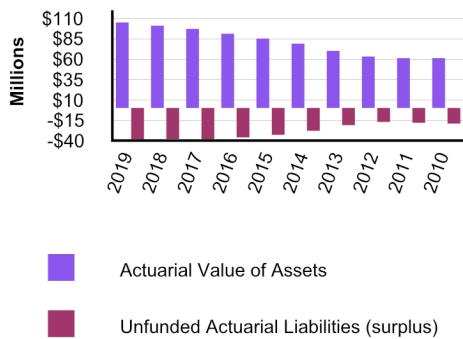
(in millions)

PERS-DBRP Actuarial Liabilities



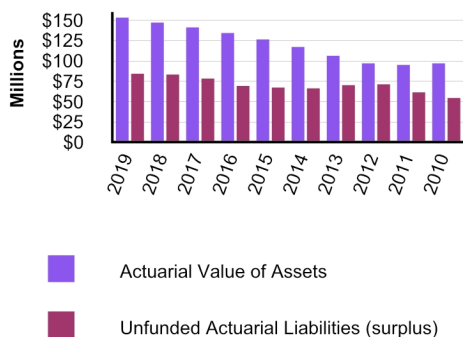
Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$5,903	\$2,054
2018	5,705	2,025
2017	5,514	2,064
2016	5,248	1,540
2015	4,927	1,544
2014	4,596	1,582
2013	4,140	1,021
2012	3,817	1,833
2011	3,801	1,610
2010	3,890	1,352

JRS Actuarial Liabilities



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$105	\$(40)
2018	101	(38)
2017	97	(39)
2016	91	(36)
2015	85	(33)
2014	79	(28)
2013	70	(21)
2012	63	(17)
2011	61	(18)
2010	61	(19)

HPORS Actuarial Liabilities



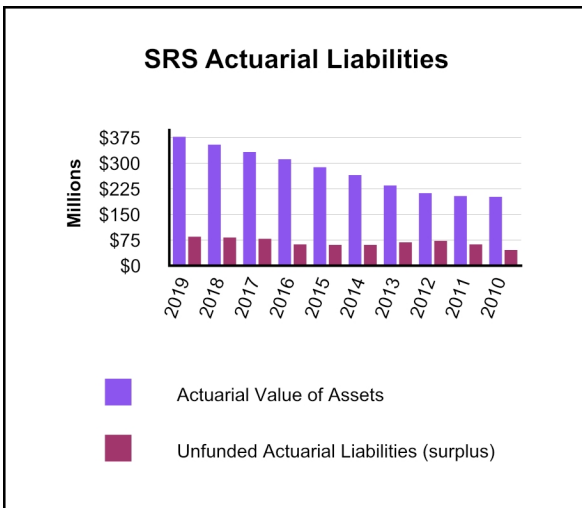
Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$153	\$84
2018	147	83
2017	141	78
2016	134	69
2015	126	67
2014	117	66
2013	106	70
2012	97	71
2011	95	61
2010	97	54

Public Employees' Retirement Board

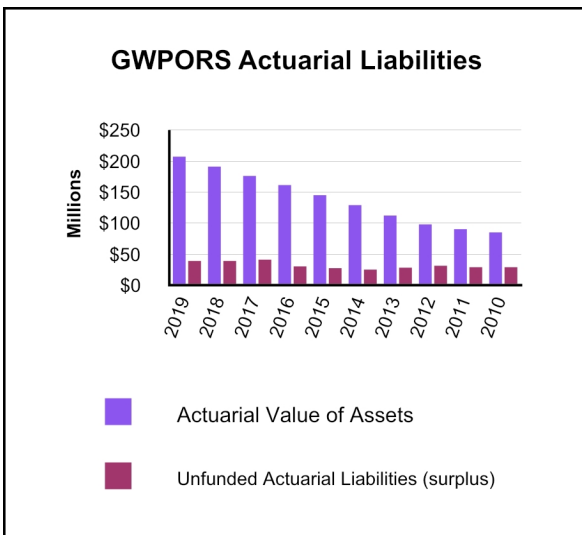
A Component Unit of the State of Montana

History of Actuarial Liabilities (cont.)

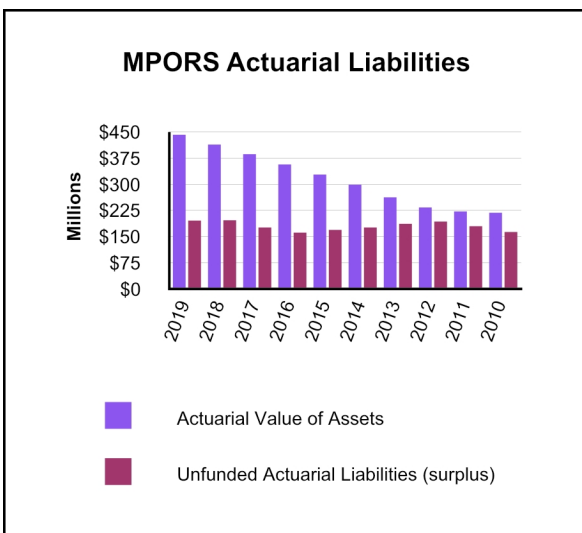
(in millions)



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$377	\$85
2018	354	83
2017	332	79
2016	311	63
2015	288	61
2014	265	61
2013	235	69
2012	212	73
2011	204	63
2010	201	46



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$207	\$39
2018	191	39
2017	176	41
2016	161	30
2015	145	27
2014	129	25
2013	112	28
2012	98	31
2011	90	29
2010	85	29



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$442	\$196
2018	414	197
2017	386	176
2016	357	162
2015	328	169
2014	299	176
2013	263	187
2012	234	193
2011	222	180
2010	218	163

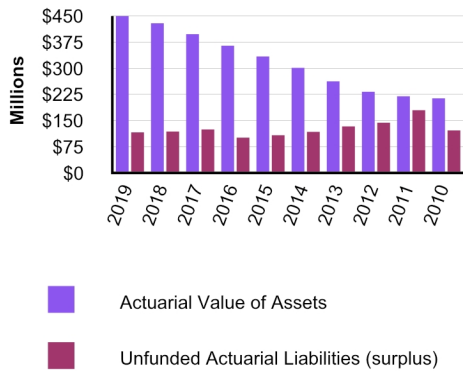
Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Actuarial Liabilities (cont.)

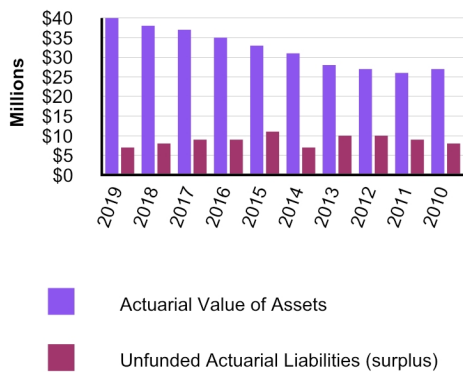
(in millions)

FURS Actuarial Liabilities



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$463	\$116
2018	429	119
2017	398	125
2016	365	101
2015	334	108
2014	301	118
2013	263	133
2012	233	144
2011	220	180
2010	214	122

VFCA Actuarial Liabilities



Fiscal Year	Actuarial Value of Assets	Unfunded Actuarial Liabilities (surplus)
2019	\$40	\$7
2018	38	8
2017	37	9
2016	35	9
2015	33	11
2014	31	7
2013	28	10
2012	27	10
2011	26	9
2010	27	8

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Market Values by Type of Investment, Last Ten Fiscal Years

(in thousands)

System	2019	2018	2017	2016	2015
PERS-DBRP¹					
CAPP Investment Pool ²	\$ 5,716,675	\$ 5,652,706	\$ 5,326,238		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)				\$ 1,184,758	\$ 1,127,097
Montana Mortgages					
Short Term Investment Pool (STIP)	174,058	111,655	130,510	142,167	89,180
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				1,893,160	2,004,038
Montana International Equity Pool (MTIP)				774,561	837,968
Montana Private Equity Pool (MPEP)				559,719	539,912
<i>Alternative Investments:</i>					
Real Estate Investments (REI)					
Montana Real Estate Pool (MTRP)				463,582	445,360
Structured Investment Vehicles (SIV)					766
Total	\$ 5,890,733	\$ 5,764,361	\$ 5,456,748	\$ 5,017,947	\$ 5,044,321
PERS-DCRP DISABILITY OPEB³					
<i>Fixed Income:</i>					
Short Term Investment Pool (STIP)	\$ 380	\$ 309	\$ 287	\$ 265	\$ 2,738
<i>Alternative Investments:</i>					
Structured Investment Vehicles (SIV)					24
Pooled Investments at Cost	4,734	4,111	3,462	2,834	
Total	\$ 5,114	\$ 4,420	\$ 3,749	\$ 3,099	\$ 2,762
JRS					
CAPP Investment Pool ²	\$ 101,339	\$ 100,269	\$ 93,939		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)				\$ 20,613	\$ 19,324
Short Term Investment Pool (STIP)	3,078	1,873	2,233	2,502	1,770
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				32,938	34,351
Montana International Equity Pool (MTIP)				13,477	14,358
Montana Private Equity Pool (MPEP)				9,738	9,255
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				8,066	7,640
Structured Investment Vehicles (SIV)					15
Total	\$ 104,417	\$ 102,142	\$ 96,172	\$ 87,334	\$ 86,713

¹ Does not include the Defined Benefit Education.

² Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Pool (CAPP) for all Defined Benefit Plans.

³ Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a separate Defined Benefit Plan.

2014	2013	2012	2011	2010
\$ 1,069,517	\$ 950,298	\$ 974,139	\$ 969,119	\$ 939,430
103,602	54,005	33,708	59,256	19,185
1,933,145	1,643,009	1,455,188	1,434,773	56,727
877,318	712,587	621,887	727,765	1,114,072
517,873	536,542	512,315	484,324	552,712
				430,729
				8,963
426,528	393,155	315,093	256,368	178,787
1,179	710	547	1,023	3,640
\$ 4,929,162	\$ 4,290,306	\$ 3,912,877	\$ 3,932,628	\$ 3,304,245

\$ 2,427

27

\$ 2,454

\$ 18,164	\$ 16,034	\$ 16,031	\$ 15,497	\$ 15,034
1,940	1,085	848	1,312	1,392
32,822	27,759	23,933	23,098	17,608
14,901	12,036	10,224	11,733	8,732
8,796	9,064	8,428	7,788	6,725
7,251	6,641	5,168	4,046	2,820
22	14	14	23	89
\$ 83,896	\$ 72,633	\$ 64,646	\$ 63,497	\$ 52,400

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Market Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2019	2018	2017	2016	2015
HPORS					
CAPP Investment Pool ¹	\$ 147,047	\$ 145,457	\$ 136,350		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)			\$ 30,235	\$ 28,714	
Short Term Investment Pool (STIP)	4,437	2,575	3,025	3,972	2,012
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				48,312	51,060
Montana International Equity Pool (MTIP)				19,766	21,346
Montana Private Equity Pool (MPEP)				14,284	13,757
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				11,830	11,349
Structured Investment Vehicles (SIV)					17
Total	\$ 151,484	\$ 148,032	\$ 139,375	\$ 128,399	\$ 128,255
SRS					
CAPP Investment Pool ¹	\$ 364,915	\$ 350,935	\$ 321,984		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)			\$ 70,501	\$ 65,674	
Short Term Investment Pool (STIP)	11,293	6,769	8,276	8,097	6,236
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				112,653	116,812
Montana International Equity Pool (MTIP)				46,091	48,818
Montana Private Equity Pool (MPEP)				33,307	31,447
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				27,586	25,966
Structured Investment Vehicles (SIV)					54
Total	\$ 376,208	\$ 357,704	\$ 330,260	\$ 298,235	\$ 295,007
GWPORS					
CAPP Investment Pool ¹	\$ 199,466	\$ 189,125	\$ 171,204		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)			\$ 36,325	\$ 32,954	
Short Term Investment Pool (STIP)	6,084	3,508	3,940	4,716	3,132
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				58,041	58,608
Montana International Equity Pool (MTIP)				23,748	24,481
Montana Private Equity Pool (MPEP)				17,161	15,792
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				14,213	13,014
Structured Investment Vehicles (SIV)					27
Total	\$ 205,550	\$ 192,633	\$ 175,144	\$ 154,204	\$ 148,008

¹ Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Plan (CAPP) for all Defined Benefit Plans.

	2014		2013		2012		2011		2010
\$	27,240	\$	24,239	\$	24,653	\$	24,318	\$	24,091
	2,585		1,355		847		1,521		1,461
	49,217		41,883		36,840		35,969		27,848
	22,336		18,165		15,732		18,258		13,815
	13,184		13,673		12,958		12,136		10,751
	10,862		10,031		7,963		6,313		4,466
	29		18		14		26		94
\$	125,453	\$	109,364	\$	99,007	\$	98,541	\$	82,526

\$	61,417	\$	53,724	\$	53,636	\$	51,323	\$	49,172
	6,984		3,986		2,715		4,719		4,473
	110,982		92,868		80,065		76,580		58,159
	50,346		40,321		34,234		38,871		28,703
	29,720		30,325		28,179		25,806		22,037
	24,475		22,245		17,308		13,434		9,259
	77		52		44		82		287
\$	284,001	\$	243,521	\$	216,181	\$	210,815	\$	172,090

\$	29,848	\$	25,466	\$	24,510	\$	22,834	\$	20,691
	3,546		1,896		1,476		2,257		2,548
	53,925		44,058		36,685		34,017		24,643
	24,482		19,106		15,697		17,252		12,513
	14,481		14,411		12,940		11,524		9,262
	11,906		10,600		8,036		6,003		3,954
	39		25		24		39		164
\$	138,227	\$	115,562	\$	99,368	\$	93,926	\$	73,775

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Market Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2019	2018	2017	2016	2015
MPORS					
CAPP Investment Pool ¹	\$ 410,397	\$ 393,802	\$ 360,476		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)				\$ 77,621	\$ 71,807
Short Term Investment Pool (STIP)	12,369	7,757	9,147	9,642	5,189
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				124,032	127,640
Montana International Equity Pool (MTIP)				50,746	53,385
Montana Private Equity Pool (MPEP)				36,671	34,373
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				30,372	28,401
Structured Investment Vehicles (SIV)					45
Total	\$ 422,766	\$ 401,559	\$ 369,623	\$ 329,084	\$ 320,840
FURS					
CAPP Investment Pool ¹	\$ 430,646	\$ 408,718	\$ 371,014		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)				\$ 79,532	\$ 72,899
Short Term Investment Pool (STIP)	13,081	8,155	9,430	9,563	5,972
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				127,086	129,543
Montana International Equity Pool (MTIP)				51,996	54,178
Montana Private Equity Pool (MPEP)				37,573	34,900
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				31,120	28,829
Structured Investment Vehicles (SIV)					51
Total	\$ 443,727	\$ 416,873	\$ 380,444	\$ 336,870	\$ 326,372
VFCA					
CAPP Investment Pool ¹	\$ 38,342	\$ 35,568	\$ 35,427		
<i>Fixed Income:</i>					
Retirement Funds Bond Pool (RFBP)				\$ 7,520	\$ 7,181
Short Term Investment Pool (STIP)	1,326	2,813	954	2,679	2,350
<i>Equities:</i>					
Montana Domestic Equity Pool (MDEP)				12,017	12,759
Montana International Equity Pool (MTIP)				4,917	5,339
Montana Private Equity Pool (MPEP)				3,553	3,439
<i>Alternative Investments:</i>					
Montana Real Estate Pool (MTRP)				2,943	2,840
Structured Investment Vehicles (SIV)					20
Total	\$ 39,668	\$ 38,381	\$ 36,381	\$ 33,629	\$ 33,928

¹ Effective FY2017, the structure of plan investments was made more efficient by creating and utilizing a Consolidated Asset Pension Plan (CAPP) for all Defined Benefit Plans.

	2014		2013		2012		2011		2010
\$	66,377	\$	57,237	\$	56,431	\$	53,729	\$	51,742
	6,007		2,819		1,472		2,593		2,305
	119,961		98,916		84,109		79,542		59,532
	54,440		42,936		35,975		40,334		29,350
	32,111		32,305		29,657		26,844		23,192
	26,516		23,681		18,220		13,981		9,547
	67		37		24		45		148
\$	305,479	\$	257,931	\$	225,888	\$	217,068	\$	175,816

\$	66,856	\$	57,369	\$	56,219	\$	53,467	\$	50,657
	6,327		3,077		1,632		2,766		2,649
	120,837		99,213		83,940		78,947		58,543
	54,855		43,017		35,869		40,044		29,067
	32,332		32,423		29,561		26,635		22,703
	26,667		23,771		18,175		13,869		9,403
	70		40		26		48		170
\$	307,944	\$	258,910	\$	225,422	\$	215,776	\$	173,192

\$	6,834	\$	6,092	\$	6,373	\$	6,415	\$	6,379
	2,322		1,949		1,704		1,655		1,385
	12,354		10,544		9,516		9,376		7,245
	5,603		4,559		4,066		4,753		3,567
	3,297		3,436		3,348		3,145		2,806
	2,726		2,491		2,057		1,637		1,124
	26		26		28		29		89
\$	33,162	\$	29,097	\$	27,092	\$	27,010	\$	22,595

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Fair Market Values by Type of Investment, Last Ten Fiscal Years (cont.)

(in thousands)

System	2019	2018	2017	2016	2015
PERS-DCRP¹					
<i>Fixed Income:</i>					
Short Term Investment Pool (STIP) ²	\$ 1,526	\$ 1,192	\$ 1,054	\$ 697	\$ 1,064
<i>Alternative Investments:</i>					
Defined Contributions Fixed Annuity	16,945	14,996	14,155	12,750	10,197
Defined Contributions Variable Annuity	244,027	210,638	177,998	141,300	131,649
Structured Investment Vehicles (SIV)					9
Total	\$ 262,498	\$ 226,826	\$ 193,207	\$ 154,747	\$ 142,919
DEFERRED COMPENSATION PLAN					
<i>Fixed Income:</i>					
Short Term Investment Pool (STIP) ²	\$ 208	\$ 2	\$ 29	\$ 189	\$ 659
<i>Alternative Investments:</i>					
Deferred Comp Fixed Annuity	234,140	226,331	238,058	238,995	232,527
Deferred Comp Variable Annuity	298,053	275,265	241,505	209,135	206,925
Deferred Comp Life Insurance	12	12	12	12	12
Structured Investment Vehicles (SIV)					6
Total	\$ 532,413	\$ 501,610	\$ 479,604	\$ 448,331	\$ 440,129

¹ Effective FY2014, the DCRP-Disability, included in the PERS-DCRP, was changed to PERS-DCRP Disability OPEB and reported as a separate Defined Benefit Plan.

² Effective FY2014, STIP was included as an investment option for the DCRP and Deferred Compensation plans.

2014	2013	2012	2011	2010
\$ 1,206	\$ 3,742	\$ 3,512	\$ 3,308	\$ 2,774
10,015	10,573	9,500	7,971	6,725
117,713	90,794	73,769	67,271	49,946
13	49	57	56	167
\$ 128,947	\$ 105,158	\$ 86,838	\$ 78,606	\$ 59,612
\$ 944	\$ 1,301	\$ 1,405	\$ 953	\$ 808
235,981	246,331	246,315	224,800	213,414
196,453	151,259	129,922	135,180	106,893
12	12	12	12	12
11	17	23	16	49
\$ 433,401	\$ 398,920	\$ 377,677	\$ 360,961	\$ 321,176

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Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Contribution Rate History

PERS-DBRP

Fiscal Year	State & Universities		Local Government		School Districts	
	Member	Employer	Employer	State	Employer	State
	Hired <07/01/11 Hired ≥ 07/01/11					
2019	7.900%	7.900%	8.670%	8.570%	0.100%	8.300%
2018	7.900%	7.900%	8.570%	8.470%	0.100%	8.200%
2017	7.900%	7.900%	8.470%	8.370%	0.100%	8.100%
2016	7.900%	7.900%	8.370%	8.270%	0.100%	8.000%
2015	7.900%	7.900%	8.270%	8.170%	0.100%	7.900%
2014	7.900%	7.900%	8.170%	8.070%	0.100%	7.800%
2012-2013	6.900%	7.900%	7.170%	7.070%	0.100%	6.800%
2010-2011	6.900%		7.170%	7.070%	0.100%	6.800%
2008-2009	6.900%		7.035%	6.935%	0.100%	6.800%
2000-2007	6.900%	6.900%	6.800%	6.800%	0.100%	6.800%
1998-1999	6.800%	6.800%	6.700%	0.100%	6.700%	0.100%
1994-1997	6.700%	6.700%	6.700%		6.700%	
1993	6.550%	6.550%	6.550%		6.550%	
1992	6.417%	6.417%	6.417%		6.417%	
1991	6.300%	6.417%	6.417%		6.417%	
1990	6.150%	6.417%	6.417%		6.417%	
1984-1989	6.000%	6.417%	6.417%		6.417%	
1982-1983	6.000%	6.320%	6.320%		6.320%	
1979-1981	6.000%	6.200%	6.200%		6.200%	
1978	6.000%	5.950%	5.950%		5.950%	
1977	6.000%	5.550%	5.550%		5.550%	
1976	6.000%	5.200%	5.200%		5.200%	
1974-1975	5.750%	4.900%	4.900%		4.900%	
1972-1973	5.750%	4.600%	4.600%		4.600%	
1970-1971	5.750%	4.300%	4.300%		4.300%	
1968-1969	5.750%	3.800%	3.800%		3.800%	
1947-1967*	2.5%-9.6%	3.300%	3.300%		3.300%	
1945-1947*	2.5%-9.6%	3.000%	3.000%		3.000%	

*1945 - 1967 Member Contributions were based on age and gender.

JRS

Fiscal Year	Member	Employer
1998-2019	7.000%	25.810%
1993-1997	7.000%	6.000%
1968-1992	6.000%	6.000%

Prior to 1998 the employer contributed 6% and additional contributions were received based on a portion of the District Court filing fees. In 1998 the filing fees were eliminated and the employer rate was increased to 25.81%.

The employer contributions were temporarily suspended for JRS beginning the first full pay period of January 2018 until after the last full pay period of June 2019, when the employer contributions were reinstated to 25.81%.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Contribution Rate History (cont.)

HPORS

Fiscal Year	Member		Employer	State
	Non-GABA	GABA		
2017-2019	13.000%	13.050 %	28.150%	10.180 %
2016	12.000%	12.050 %	28.150%	10.180 %
2015	11.000%	11.050 %	28.150%	10.180 %
2014	10.000%	10.050 %	28.150%	10.180 %
1998-2013	9.000%	9.050 %	26.150%	10.180 %
1992-1997	9.000%		26.100%	10.180 %
1991	7.590%		26.100%	10.180 %
1986-1990	7.590%		16.570%	10.180 %
1982-1985	6.500%		16.570%	
1976-1981	6.500%		16.000%	
1975	6.500%		15.000%	
1971-1974	5.000%		8.000%	

SRS

Fiscal Year	Member	Employer
2018-2019	10.495%	13.115%
2010-2017	9.245%	10.115%
2008-2009	9.245%	9.825%
1998-2007	9.245%	9.535%
1997	7.865%	8.535%
1996	7.865%	8.535%
1986-1995	7.000%	7.670%
1982-1985	7.000%	7.620%
1975-1981	7.000%	7.550%

GWPORS

Fiscal Year	Member	Employer
2003-2019	10.560%	9.000%
1998-2002	8.500%	9.000%
1996-1997	7.900%	8.150%
1986-1995	7.900%	7.150%
1982-1985	7.000%	7.150%
1964-1981	7.000%	7.000%

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Contribution Rate History (cont.)

MPORS

Fiscal Year	Member				Employer	State
	Hired <7/1/75	Hired >6/30/75	Hired >6/30/79	Hired >6/30/97 GABA		
2000-2019	5.800%	7.000 %	8.500 %	9.000 %	14.410%	29.370%
1998-1999	7.800%	9.000 %	10.500 %	11.000 %	14.410%	29.370%
1997	7.800%	9.000 %	10.500 %		14.360%	29.370%
1994-1996	7.800%	9.000 %	10.500 %		14.360%	15.660%
1993	7.800%	9.000 %	10.500 %		13.920%	15.660%
1992	6.000%	7.200 %	8.700 %		13.920%	15.660%
1986-1991	6.000%	6.000 %	7.500 %		13.020%	15.060%
1982-1985	6.000%	6.000 %	7.500 %		14.040%	14.040%
1980-1981	6.000%	6.000 %	7.500 %		14.000%	14.000%
1978-1979	6.000%	6.000 %			12.000%	12.000%
1976-1977	6.000%	6.000 %			11.000%	12.000%
1974-1975	6.000%				11.000%	12.000%

FURS

Fiscal Year	Member			
	Non-GABA	GABA	Employer	State
1998-2019	9.500%	10.700%	14.360%	32.610%
1997	7.800%		14.360%	32.610%
1996	7.800%		14.360%	24.210%
1995	6.000%		13.020%	24.210%
1992-1994	6.000%		13.020%	23.270%
1986-1991	6.000%		13.020%	22.980%
1984-1985	6.000%		18.000%	18.000%
1983	6.000%		15.000%	15.000%
1981-1982	6.000%		12.000%	12.000%

PERS-DCRP

Fiscal Year	State & University			Local Government		School Districts	
	Member			Employer	State	Employer	State
	Hired <07/01/11	Hired ≥ 07/01/11	Employer				
2019	7.900%	7.900 %	8.670%	8.570%	0.100%	8.300%	0.370%
2018	7.900%	7.900 %	8.570%	8.470%	0.100%	8.200%	0.370%
2017	7.900%	7.900 %	8.470%	8.370%	0.100%	8.100%	0.370%
2016	7.900%	7.900 %	8.370%	8.270%	0.100%	8.000%	0.370%
2015	7.900%	7.900 %	8.270%	8.170%	0.100%	7.900%	0.370%
2014	7.900%	7.900 %	8.170%	8.070%	0.100%	7.800%	0.370%
2012-2013	6.900%	7.900 %	7.170%	7.070%	0.100%	6.800%	0.370%
2010-2011	6.900%		7.170%	7.070%	0.100%	6.800%	0.370%
2008-2009	6.900%		7.035%	6.935%	0.100%	6.800%	0.235%
2003-2007	6.900%		6.900%	6.800%	0.100%	6.800%	0.100%

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Membership in Retirement Plans, Last Ten Fiscal Years

System	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
PERS-DBRP										
Active	28,908	28,646	29,395	28,390	28,237	28,229	28,401	28,548	28,659	28,834
Retirees/Beneficiaries	23,245	22,556	21,805	21,333	20,681	20,081	19,451	18,738	18,123	17,512
Term-Non-Vested	19,316	17,973	16,659	10,031	8,839	7,666	6,712	6,164	5,787	5,402
Term-Vested	3,943	3,793	3,677	3,062	2,925	2,825	2,686	2,560	2,535	2,471
Total	75,412	72,968	71,536	62,816	60,682	58,801	57,250	56,010	55,104	54,219
The Term-Non-Vested count for fiscal year 2017 forward includes dormant accounts that were previously not counted.										
JRS										
Active	58	55	56	55	55	55	54	54	54	51
Retirees/Beneficiaries	73	70	68	68	67	67	65	56	58	55
Term-Non-Vested	1	1	1							
Term-Vested	2	3	2	2	2	1				1
Total	134	129	127	125	124	123	119	110	112	107
HPORS										
Active ¹	232	233	238	228	241	229	219	218	214	230
Retirees/Beneficiaries	342	338	331	329	327	322	310	305	302	295
Term-Non-Vested	25	23	17	18	13	14	11	10	9	6
Term-Vested	18	14	16	16	11	11	14	11	11	13
Total	617	608	602	591	592	576	554	544	536	544
SRS										
Active	1,454	1,429	1,415	1,364	1,336	1,307	1,276	1,241	1,230	1,181
Retirees/Beneficiaries	726	681	648	620	577	533	503	469	441	415
Term-Non-Vested	633	539	465	394	342	288	235	212	196	157
Term-Vested	135	129	108	95	81	73	67	60	48	36
Total	2,948	2,778	2,636	2,473	2,336	2,201	2,081	1,982	1,915	1,789

¹Includes Drop Accounts

Public Employees' Retirement Board

A Component Unit of the State of Montana

History of Membership in Retirement Plans, Last Ten Fiscal Years (cont)

System	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
GWPORS										
Active	1,021	1,010	1,012	989	993	955	971	972	951	966
Retirees/Beneficiaries	346	312	276	250	231	203	180	163	145	136
Term-Non-Vested	447	382	304	278	235	175	148	146	113	100
Term-Vested	138	123	114	105	95	87	69	64	61	47
Total	1,952	1,827	1,706	1,622	1,554	1,420	1,368	1,345	1,270	1,249
MPORS										
Active ¹	806	787	775	762	743	743	734	701	739	727
Retirees/Beneficiaries	850	812	791	768	744	716	710	676	676	670
Term-Non-Vested	164	153	143	112	103	90	77	76	71	65
Term-Vested	94	78	75	61	60	55	52	49	40	47
Total	1,914	1,830	1,784	1,703	1,650	1,604	1,573	1,502	1,526	1,509
FURS										
Active	722	691	678	644	627	616	610	590	579	570
Retirees/Beneficiaries	661	652	630	621	609	595	587	571	552	546
Term-Non-Vested	67	66	54	77	71	66	63	62	60	53
Term-Vested	36	41	39	27	21	19	15	13	13	13
Total	1,486	1,450	1,401	1,369	1,328	1,296	1,275	1,236	1,204	1,182
VFCA										
Active	2,249	2,029	1,957	1,895	1,977	1,935	2,101	2,106	2,105	2,315
Retirees/Beneficiaries	1,488	1,474	1,438	1,425	1,371	1,332	1,285	1,242	1,183	1,149
Term-Vested	777	815	824	878	905	939	884	879	870	827
Total	4,514	4,318	4,219	4,198	4,253	4,206	4,270	4,227	4,158	4,291

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Benefit Expenses and Refunds by Type, Last Ten Fiscal Years

System	2019	2018	2017	2016	2015
PERS-DBRP					
<i>Benefit Expenses</i>					
Retirees	\$ 389,530	\$ 365,082	\$ 338,438	\$ 335,806	\$ 311,019
Survivors ¹	28,854	25,941	24,082	5,119	4,717
Disability	1,966	2,073	1,873	2,045	2,301
<i>Refunds</i>					
Death	2,094	2,243	1,962	1,134	1,465
Lump Sum	12,361	12,619	12,252	10,379	11,688
Total	\$ 434,805	\$ 407,958	\$ 378,607	\$ 354,483	\$ 331,190
Number of Lump Sum	1,625	1,353	1,269	1,717	1,661
JRS					
<i>Benefit Expenses</i>					
Retirees	\$ 2,862	\$ 2,708	\$ 2,645	\$ 3,278	\$ 2,928
Survivors ¹	941	954	849	26	113
Disability	36	61	60	109	
<i>Refunds</i>					
Death	7			3	
Lump Sum		149			
Total	\$ 3,846	\$ 3,872	\$ 3,554	\$ 3,416	\$ 3,041
Number of Lump Sum		1			
HPORS					
<i>Benefit Expenses</i>					
Retirees	\$ 9,721	\$ 9,793	\$ 9,473	\$ 10,053	\$ 9,498
Survivors ¹	2,155	1,541	1,386	245	238
Disability	179	212	177	181	196
<i>Refunds</i>					
Death	7			3	
Lump Sum	582	322	245	94	69
Total	\$ 12,644	\$ 11,868	\$ 11,281	\$ 10,576	\$ 10,001
Number of Lump Sum	2	3	9	4	4
Number of DROP	1				
SRS					
<i>Benefit Expenses</i>					
Retirees	\$ 17,318	\$ 16,058	\$ 14,861	\$ 14,123	\$ 12,560
Survivors ¹	1,301	1,146	1,071	532	471
Disability	821	739	744	792	988
<i>Refunds</i>					
Death	72	110	24	29	1
Lump Sum	1,439	1,490	1,383	1,029	1,217
Total	\$ 20,951	\$ 19,543	\$ 18,083	\$ 16,505	\$ 15,237
Number of Lump Sum	95	107	98	110	115

¹ The amount of survivors increased in fiscal year 2017 forward due to the way the newly implemented computer system categorizes survivors.

	2014		2013		2012		2011		2010
\$	287,895	\$	267,690	\$	245,959	\$	224,108	\$	204,885
	4,512		4,240		3,968		3,748		3,692
	2,048		1,922		2,065		2,253		2,481
	1,728		169		770		1,114		1,128
	10,070		11,254		11,991		11,302		10,967
\$	306,253	\$	285,275	\$	264,753	\$	242,525	\$	223,153
	1,809		2,237		2,307		1,998		2,537
<hr/>									
\$	2,911	\$	2,478	\$	2,291	\$	2,190	\$	2,069
	112		75		53		50		49
<hr/>									
\$	3,023	\$	2,553	\$	2,344	\$	2,240	\$	2,118
<hr/>									
\$	8,894	\$	8,270	\$	7,794	\$	7,462	\$	7,198
	238		248		239		233		216
	212		191		188		162		143
					2		9		
	84		51		65		121		58
\$	9,428	\$	8,760	\$	8,288	\$	7,987	\$	7,615
	5		5		8		5		4
<hr/>									
\$	11,482	\$	10,430	\$	9,356	\$	8,273	\$	7,291
	403		392		347		292		293
	802		761		676		665		693
	45						7		
	1,185		1,159		1,248		938		766
\$	13,917	\$	12,742	\$	11,627	\$	10,175	\$	9,043
	107		137		144		102		125

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Benefit Expenses and Refunds by Type, Last Ten Fiscal Years (cont.)

(in thousands)

System	2019	2018	2017	2016	2015
GWPORS					
<i>Benefit Expenses</i>					
Retirees	\$ 6,695	\$ 5,932	\$ 5,233	\$ 4,910	\$ 4,412
Survivors ¹	549	499	487	86	88
Disability	75	49	66	71	50
<i>Refunds</i>					
Death	31	43	24	1	
Lump Sum	1,001	1,105	1,036	1,066	801
Total	\$ 8,351	\$ 7,628	\$ 6,846	\$ 6,134	\$ 5,351
Number of Lump Sum	88	75	64	97	103
MPORS					
<i>Benefit Expenses</i>					
Retirees	\$ 20,895	\$ 21,622	\$ 20,628	\$ 20,548	\$ 19,294
Survivors ¹	4,219	1,928	1,720	747	696
Disability	1,093	936	850	663	568
<i>Refunds</i>					
Death	14	81	4	3	2
DROP		772	273	819	1,446
Lump Sum	3,637	1,903	1,043	421	733
Total	\$ 29,858	\$ 27,242	\$ 24,518	\$ 23,201	\$ 22,739
Number of Lump Sum	24	19	17	29	37
Number of DROP	1	8	2	5	10
FURS					
<i>Benefit Expenses</i>					
Retirees	\$ 21,084	\$ 19,658	\$ 18,470	\$ 20,189	\$ 18,986
Survivors ¹	4,243	3,919	3,651	478	484
Disability	294	282	211	224	271
<i>Refunds</i>					
Death	5	4	4	5	4
Lump Sum	90	173	168	46	2
Total	\$ 25,716	\$ 24,036	\$ 22,504	\$ 20,942	\$ 19,747
Number of Lump Sum	9	12	8	8	8
VFCA					
<i>Benefit Expenses</i>					
Retirees	\$ 2,985	\$ 2,933	\$ 2,858	\$ 2,623	\$ 2,369
Survivors ¹	11	11			
Disability	1				
Total	\$ 2,997	\$ 2,944	\$ 2,858	\$ 2,623	\$ 2,369

¹ The amount of survivors increased in fiscal year 2017 forward due to the way the newly implemented computer system categorizes survivors.

	2014		2013		2012		2011		2010
\$	3,789	\$	3,497	\$	3,106	\$	2,801	\$	2,566
	61		59		80		54		49
	60		19		7		2		3
	69				10		6		4
	1,187		841		1,227		991		879
\$	5,166	\$	4,416	\$	4,430	\$	3,854	\$	3,501
	110		122		130		114		143
<hr/>									
\$	18,245	\$	17,269	\$	16,195	\$	15,835	\$	14,652
	675		656		654		629		613
	530		538		504		546		462
					1		3		
	469		1,177		352		449		407
	549		656		355		498		442
\$	20,468	\$	20,296	\$	18,061	\$	17,960	\$	16,576
	36		44		37		36		39
	5		7		4		5		5
<hr/>									
\$	18,106	\$	16,965	\$	15,884	\$	12,554	\$	14,031
	490		478		466		479		427
	252		227		169		2,560		140
	24						12		
	166		73		119		128		86
\$	19,038	\$	17,743	\$	16,638	\$	15,733	\$	14,684
	9		6		13		6		8
<hr/>									
\$	2,281	\$	2,819	\$	2,046	\$	1,938	\$	1,848
									9
\$	2,281	\$	2,819	\$	2,046	\$	1,938	\$	1,857

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Distributions Processed, Last Ten Fiscal Years

(in thousands)

System	2019	2018	2017	2016	2015
PERS-DCRP					
Number of Retirements	74	57	32	27	20
Number of Deaths	8	8	8	11	5
Amount of Benefits	\$ 942	\$ 403	\$ 232	\$ 262	\$ 190
Number of Full Refunds	177	181	167	246	164
Amount Refunded	\$ 6,503	\$ 7,415	\$ 5,554	\$ 4,106	\$ 5,215
Number of Partial Refunds	74	70	45	52	46
Amount Refunded	\$ 1,975	\$ 1,928	\$ 1,251	\$ 931	\$ 698
Number of Forfeitures	132	117	114	115	91
Amount of Contributions Forfeited ¹	\$ 714	\$ 746	\$ 397	\$ 383	\$ 333

¹ Members terminating with less than 5 years of membership service forfeit their employer contributions.

	2014	2013	2012	2011	2010
	26	35	4	8	35
	8	5	1		2
\$	155 \$	154 \$	573 \$	38 \$	297
	147	179	158	182	116
\$	3,616 \$	3,759 \$	3,077 \$	3,226 \$	1,438
	57	60	35	75	13
\$	967 \$	436 \$	323 \$	393 \$	198
	72	75	98	124	94
\$	252 \$	398 \$	415 \$	417 \$	318

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2019

	Amount of Monthly Benefit	# of Retired Members	Type of Retirement		
			Regular	Disability	Survivor ²
PERS-DBRP	\$1-250	1,745	1,667	1	77
	\$251-500	3,383	3,255	30	98
	\$501-750	2,964	2,849	24	91
	\$751-1,000	2,378	2,292	25	61
	\$1,001-1,250	2,042	1,982	23	37
	\$1,251-1,500	1,571	1,525	12	34
	\$1,501-1,750	1,298	1,272	13	13
	\$1,751-2,000	1,227	1,205	6	16
	Over \$2,000	6,637	6,556	12	69
	Total	23,245	22,603	146	496
PERS-DCRP Disability OPEB	\$1-250				
	\$251-500	3		3	
	\$501-750	2		2	
	\$751-1,000	1		1	
	\$1,001-1,250				
	\$1,251-1,500	3		3	
	\$1,501-1,750				
	\$1,751-2,000	1		1	
	Over \$2,000				
	Total	10		10	
JRS	\$1-250				
	\$251-500				
	\$501-750				
	\$751-1,000	1	1		
	\$1,001-1,250	1			1
	\$1,251-1,500	4	4		
	\$1,501-1,750	6	6		
	\$1,751-2,000				
	Over \$2,000	61	59		2
	Total	73	70		3

¹ Option Selected:

1 - Beneficiary receives lump sum of member's unused contributions

2 - Beneficiary receives 100 percent of member's reduced monthly benefit

3 - Beneficiary receives 50 percent of member's reduced monthly benefit

4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement

4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement

Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member

Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

² For the purposes of this schedule, Survivor is anyone receiving a monthly benefit that is not the original member.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2019

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
PERS-DBRP	1,263	303	58	21	74		26	1,731	14
	2,363	683	127	53	149		8	3,377	6
	1,975	648	138	59	142		2	2,962	2
	1,544	548	153	42	90		1	2,378	
	1,315	454	170	35	67		1	2,042	
	1,000	362	129	37	43			1,570	1
	799	318	121	30	30			1,298	
	706	360	113	24	24			1,227	
	3,683	1,711	888	153	202			6,637	
	14,648	5,387	1,897	454	821		38	23,222	23

	Option Selected ¹							GABA ³	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
PERS-DCRP	3								3
Disability OPEB	2								2
	1								1
	3								3
	1								1
	10								10

	Option Selected ¹							GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs	Statutory	Non-Increasing Annuity		
JRS		1					1		1
	1	3							4
	1	3	2					5	1
	22	30	6		3			35	26
	24	37	8		3		1	40	33

³ GABA is not an option for PERS DCRP-Disability OPEB retired members

GABA - Members covered under the Guaranteed Annual Benefit Adjustment

NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2019

	Amount of Monthly Benefit	# of Retired Members ²	Type of Retirement		
			Regular	Disability	Survivor ³
HPORS	\$1-250				
	\$251-500	6	5		1
	\$501-750	6	4		2
	\$751-1,000	10	9		1
	\$1,001-1,250	5	3		2
	\$1,251-1,500	3	3		
	\$1,501-1,750	5	4		1
	\$1,751-2,000	18	17		1
	Over \$2,000	289	263	6	20
	Total	342	308	6	28
SRS	\$1-250	20	16	1	3
	\$251-500	38	37		1
	\$501-750	57	52	2	3
	\$751-1,000	35	35		
	\$1,001-1,250	34	33		1
	\$1,251-1,500	36	34	1	1
	\$1,501-1,750	42	40	1	1
	\$1,751-2,000	40	34	4	2
	Over \$2,000	424	392	20	12
	Total	726	673	29	24
GWPORS	\$1-250	3	3		
	\$251-500	23	20	1	2
	\$501-750	39	37	1	1
	\$751-1,000	41	37		4
	\$1,001-1,250	30	30		
	\$1,251-1,500	30	26	2	2
	\$1,501-1,750	30	30		
	\$1,751-2,000	24	24		
	Over \$2,000	126	126		
	Total	346	333	4	9

¹ Option Selected:

1 - Beneficiary receives lump sum of member's unused contributions

2 - Beneficiary receives 100 percent of member's reduced monthly benefit

3 - Beneficiary receives 50 percent of member's reduced monthly benefit

4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement

4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement

Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member

Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

² HPORS does not include DROP members.

³ For the purposes of this schedule, Survivor is anyone receiving a monthly benefit that is not the original member.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2019

	Option Selected ¹					Statutory	Non-Increasing Annuity	GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs				
HPORS						6		4	2
						6		6	
						10		6	4
						5		3	2
						3		2	1
						5		5	
						18		9	9
						289		234	55
						342		269	73
	Option Selected ¹					Statutory	Non-Increasing Annuity	GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs				
SRS	12	6	2					20	
	13	18	4		3			38	
	25	23	5	1	3			57	
	21	11	2		1			35	
	15	13	4	2				34	
	12	16	5	1	2			36	
	18	18	4		2			42	
	17	20	2		1			40	
	212	131	45	16	20			424	
	345	256	73	20	32			726	
	Option Selected ¹					Statutory	Non-Increasing Annuity	GABA	NON-GABA
	1	2	3	4 10 yrs	4 20 yrs				
GWPORS	2	1						3	
	8	12	1		2			23	
	24	9	2	1	3			39	
	23	12	2		4			41	
	14	8	6	1	1			30	
	16	8	6					30	
	16	7	6		1			30	
	15	9						24	
	56	46	14	2	8			126	
	174	112	37	4	19			346	

GABA - Members covered under the Guaranteed Annual Benefit Adjustment

NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Retired Members by Type of Benefit

As of June 30, 2019

	Amount of Monthly Benefit	# of Retired Members ²	Type of Retirement		
			Regular	Disability	Survivor ³
MPORS	\$1-250	29	29		
	\$251-500	18	18		
	\$501-750	20	19		1
	\$751-1,000	22	17		5
	\$1,001-1,250	14	14		
	\$1,251-1,500	12	12		
	\$1,501-1,750	28	26	1	1
	\$1,751-2,000	58	49	1	8
	Over \$2,000	649	582	30	37
	Total	850	766	32	52
FURS	\$1-250	11	10		1
	\$251-500	39	35		4
	\$501-750	4	4		
	\$751-1,000	9	9		
	\$1,001-1,250	6	6		
	\$1,251-1,500	6	6		
	\$1,501-1,750	18	15	1	2
	\$1,751-2,000	35	32		3
	Over \$2,000	533	489	9	35
	Total	661	606	10	45
VFCA	\$1-250	1,452	1,448	1	3
	\$251-500	36	36		
	\$501-750				
	\$751-1,000				
	\$1,001-1,250				
	\$1,251-1,500				
	\$1,501-1,750				
	\$1,751-2,000				
	Over \$2,000				
	Total	1,488	1,484	1	3

¹ Option Selected (excluding the VFCA):

1 - Beneficiary receives lump sum of member's unused contributions

2 - Beneficiary receives 100 percent of member's reduced monthly benefit

3 - Beneficiary receives 50 percent of member's reduced monthly benefit

4 10 yrs - Guaranteed for the life of member or a minimum of 10 years after member's retirement

4 20 yrs - Guaranteed for the life of member or a minimum of 20 years after member's retirement

Statutory - A surviving spouse or dependent child of a member of HPORS, MPORS, or FURS receiving benefits upon the death of the member

Non-Increasing Annuity - An optional death benefit, payable for life to a PERS beneficiary who elects to receive a death payment as defined in §19-3-1202, MCA in lieu of a survivor benefit available under §19-3-1204, MCA

² MPORS does not include DROP members.

³ For the purposes of this schedule, Survivor is anyone receiving a monthly benefit that is not the original member.

⁴ Option Selected VFCA:

1 - Member receiving monthly benefit

2 - Non-Increasing Annuity - Benefit paid to survivor equal to member's full or partial benefit. Benefit is limited to 40 months including any pension paid to member before death

[illegible]

GABA - Members covered under the Guaranteed Annual Benefit Adjustment
NON-GABA - Members not covered under the Guaranteed Annual Benefit Adjustment

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Active Members by Age and Gender

As of June 30, 2019

System	Ages	Male	Female	Unknown ¹	Total	System	Ages	Male	Female	Unknown ¹	Total
PERS-DBRP	Under 20	70	58	37	165	GWPORS	Under 20	6	1		7
	20 - 29	1,281	1,640	68	2,989		20 - 29	147	48		195
	30 - 39	2,334	3,076	89	5,499		30 - 39	207	67		274
	40 - 49	2,660	3,520	69	6,249		40 - 49	208	61		269
	50 - 59	3,530	4,642	84	8,256		50 - 59	169	39		208
	60 - 69	2,291	2,862	39	5,192		60 - 69	47	19		66
	70 & Older	300	250	5	555		70 & Older	2			2
	Unknown ¹			3	3		Unknown ¹				
	Total	12,466	16,048	394	28,908		Total	786	235		1,021
JRS	Under 20					MPORS ²	Under 20				
	20 - 29						20 - 29	127	25	12	164
	30 - 39	1	2		3		30 - 39	262	25	16	303
	40 - 49	4	4		8		40 - 49	176	12	9	197
	50 - 59	14	12		26		50 - 59	81	5	1	87
	60 - 69	15	3		18		60 - 69	6			6
	70 & Older	2	1		3		70 & Older	1			1
	Unknown ¹						Unknown ¹				
	Total	36	22		58		Total	653	67	38	758
HPORS ³	Under 20					FURS	Under 20				
	20 - 29	35	5		40		20 - 29	100	4	5	109
	30 - 39	70	8		78		30 - 39	251	15	15	281
	40 - 49	61	2		63		40 - 49	224	5	7	236
	50 - 59	28	1		29		50 - 59	79		3	82
	60 - 69	5			5		60 - 69	13			13
	70 & Older						70 & Older	1			1
	Unknown ¹						Unknown ¹				
	Total	199	16		215		Total	668	24	30	722
SRS	Under 20	5	3		8	PERS-DCRP	Under 20			1	1
	20 - 29	287	67	2	356		20 - 29	103	147	6	256
	30 - 39	347	71	1	419		30 - 39	276	388	6	670
	40 - 49	300	50	2	352		40 - 49	367	427	10	804
	50 - 59	198	40	1	239		50 - 59	344	376	4	724
	60 - 69	65	11	1	77		60 - 69	167	219	1	387
	70 & Older	2	1		3		70 & Older	16	12		28
	Unknown ¹						Unknown ¹			1	1
	Total	1,204	243	7	1,454		Total	1,273	1,569	29	2,871

¹ Membership data not received as of June 30, 2019.

² MPORS does not include DROP.

³ HPORS does not include DROP.

VFCA not included because membership data not required on members until retirement.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Retired Members by Age and Gender

As of June 30, 2019

System	Ages	Male	Female	Unknown	Total	System	Ages	Male	Female	Unknown	Total
PERS-DBRP	Under 20					GWPORS	Under 20				
	20 - 29	5	10		15		20 - 29	1	1		2
	30 - 39	26	40		66		30 - 39		1		1
	40 - 49	50	59	1	110		40 - 49	1	2		3
	50 - 59	471	574	5	1,050		50 - 59	66	15		81
	60 - 69	3,910	4,971	9	8,890		60 - 69	122	33		155
	70 & Older	5,451	7,655	8	13,114		70 & Older	79	25		104
	Total	9,913	13,309	23	23,245		Total	269	77		346
JRS	Under 20					MPORS¹	Under 20	4	2		6
	20 - 29						20 - 29				
	30 - 39						30 - 39	7	1		8
	40 - 49						40 - 49	38	12		51
	50 - 59		1		1		50 - 59	178	45	2	225
	60 - 69	14	7		21		60 - 69	218	45		263
	70 & Older	33	18		51		70 & Older	197	100		297
	Total	47	26		73		Total	642	205	3	850
HPORS¹	Under 20					FURS	Under 20				
	20 - 29	1			1		20 - 29				
	30 - 39						30 - 39	6	2		8
	40 - 49	17	8		25		40 - 49	15	6		21
	50 - 59	59	18		77		50 - 59	116	21		137
	60 - 69	44	20		64		60 - 69	163	22		185
	70 & Older	127	48		175		70 & Older	193	117		310
	Total	248	94		342		Total	493	168		661
SRS	Under 20					VFCA	Under 20				
	20 - 29	1	1		2		20 - 29				
	30 - 39		2	1	3		30 - 39				
	40 - 49	32	7	2	41		40 - 49				
	50 - 59	148	29	1	178		50 - 59	79	3	5	87
	60 - 69	264	41		305		60 - 69	536	43	17	596
	70 & Older	159	38		197		70 & Older	745	58	2	805
	Total	604	118	4	726		Total	1,360	104	24	1,488

¹ HPORS and MPORS does not include DROP.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years

Retirement Effective Dates	PERS - Defined Benefit Retirement Plan Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit	\$ 283	\$ 1,136	\$ 2,393	\$ 4,262	\$ 4,641	\$ 6,345	\$ 5,797
Average HAC ¹	1,782	8,994	12,732	13,693	12,982	14,299	9,373
Number of retired members	36	175	198	191	148	170	225
Period 7/1/2017 - 6/30/2018							
Average monthly benefit	570	1,269	2,156	4,295	4,095	6,341	6,799
Average HAC ¹	6,273	8,102	9,220	13,802	11,511	14,441	9,643
Number of retired members	30	228	234	216	183	244	259
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	355	2,234	4,652	6,169	8,642	10,965	12,058
Average HAC ¹	3,240	16,433	22,696	20,909	25,358	22,552	19,608
Number of retired members	58	332	333	308	302	341	457
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	2,048	837	1,497	2,075	3,082	4,665	3,163
Average HAC ¹	8,873	6,555	6,288	6,519	7,586	8,726	4,769
Number of retired members	20	168	168	181	147	184	263
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	1,930	982	1,334	1,688	1,507	1,972	3,078
Average HAC ¹	1,806	2,320	2,553	2,775	3,066	3,098	3,948
Number of retired members	27	159	189	164	180	196	262
Period 7/1/2013 - 6/30/2014							
Average monthly benefit	3,243	1,233	1,888	2,001	2,247	2,533	3,010
Average HAC ¹	2,004	2,799	3,016	3,326	3,548	4,092	4,849
Number of retired members	45	214	201	186	188	192	199
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	2,508	1,315	1,782	1,950	1,582	2,174	3,229
Average HAC ¹	2,225	2,880	3,137	3,418	3,518	3,972	4,728
Number of retired members	48	183	221	169	186	173	263
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	2,024	2,492	808	1,713	2,193	3,627	3,508
Average HAC ¹	1,634	2,746	2,831	3,232	3,319	4,157	4,543
Number of retired members	51	208	213	170	172	183	241
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	2,529	1,322	1,260	1,238	2,501	2,843	3,125
Average HAC ¹	2,055	2,790	2,962	3,060	3,376	3,862	4,473
Number of retired members	43	170	181	163	148	179	293
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	1,941	1,702	2,512	3,309	2,423	2,306	3,637
Average HAC ¹	2,125	2,480	2,670	4,341	3,373	4,010	4,528
Number of retired members	49	163	150	149	114	137	163

¹ HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

	DC Disability OPEB Years of Credited Service						
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit				\$	1,429.37		
Average HAC ¹					4,659		
Number of retired members					2		
Period 7/1/2017 - 6/30/2018							
Average monthly benefit		344	\$	1,370			
Average HAC ¹		1,302		6,213			
Number of retired members		1		1			
Period 7/1/2016 - 6/30/2017							
Average monthly benefit					2,206		
Average HAC ¹					5,446		
Number of retired members					1		
Period 7/1/2015 - 6/30/2016							
Average monthly benefit				1,243			
Average HAC ¹				5,581			
Number of retired members				1			
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		577					
Average HAC ¹		4,019					
Number of retired members		2					
Period 7/1/2013 - 6/30/2014							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2012 - 6/30/2013							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		356		553			
Average HAC ¹		3,564		2,714			
Number of retired members		1		1			
Period 7/1/2010 - 6/30/2011							
Average monthly benefit							
Average HAC ¹							
Number of retired members							
Period 7/1/2009 - 6/30/2010							
Average monthly benefit				746			
Average HAC ¹				3,455			
Number of retired members				1			

¹ HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Judges' Retirement System Years of Credited Service														
Retirement Effective Dates	0-5		5-10		10-15		15-20		20-25		25-30		30+	
Period 7/1/2018 - 6/30/2019														
Average monthly benefit	\$	1,994	\$	3,522	\$	9,639	\$	6,043	\$	7,759				
Average HAC ¹		10,670		10,591		10,591		10,591		5,098				
Number of retired members		2		1		2		1		1				
Period 7/1/2017 - 6/30/2018														
Average monthly benefit				8,259										
Average HAC ¹				11,173										
Number of retired members				2										
Period 7/1/2016 - 6/30/2017														
Average monthly benefit		4,031				19,862		23,441						
Average HAC ¹		20,225				20,930		39,630						
Number of retired members		2				6		4						
Period 7/1/2015 - 6/30/2016														
Average monthly benefit		1,587				9,917				5,319		6,417		
Average HAC ¹		9,870				20,501				10,511		10,511		
Number of retired members		1				2				1		1		
Period 7/1/2014 - 6/30/2015														
Average monthly benefit												5,600		
Average HAC ¹												9,800		
Number of retired members												2		
Period 7/1/2013 - 6/30/2014														
Average monthly benefit						2,792		4,899		5,088				
Average HAC ¹								9,800		9,800				
Number of retired members							1	1		1				
Period 7/1/2012 - 6/30/2013														
Average monthly benefit				2,893		4,877		6,474		6,018				
Average HAC ¹				9,427		9,703		9,494		9,494				
Number of retired members				3		3		1		3				
Period 7/1/2011 - 6/30/2012														
Average monthly benefit														
Average HAC ¹														
Number of retired members														
Period 7/1/2010 - 6/30/2011														
Average monthly benefit		2,331		3,069		5,290				6,231				
Average HAC ¹		8,906		7,842		9,201				8,906				
Number of retired members		1		1		2				1				
Period 7/1/2009 - 6/30/2010														
Average monthly benefit									5,601					
Average HAC ¹									9,797					
Number of retired members									1					

¹ HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Highway Patrol Officers' Retirement System Years of Credited Service							
Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit		\$	4,161		\$	3,012	
Average HAC ¹			11,668			5,575	
Number of retired members			2			6	
Period 7/1/2017 - 6/30/2018							
Average monthly benefit		1,755	3,812	2,087	5,253	3,090	
Average HAC ¹			8,186	5,362	8,032		
Number of retired members		1	4	3	8	2	
Period 7/1/2016 - 6/30/2017							
Average monthly benefit				6,942	6,766	8,143	
Average HAC ¹				21,334	10,012	11,677	
Number of retired members				4	5	4	
Period 7/1/2015 - 6/30/2016							
Average monthly benefit				2,825	6,420	4,310	
Average HAC ¹				5,434	11,885	6,079	
Number of retired members				1	7	2	
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		1,581	1,113	2,810	3,475	4,315	
Average HAC ¹		5,049		5,412	2,852	6,227	
Number of retired members		2	1	1	4	2	
Period 7/1/2013 - 6/30/2014							
Average monthly benefit			479	2,348	3,330	5,043	
Average HAC ¹			3,557	4,559	5,859	6,641	
Number of retired members			1	1	9	2	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	2,021				3,241	3,351	
Average HAC ¹	3,925				5,702	7,273	
Number of retired members	1				7	3	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		711			3,108	4,119	
Average HAC ¹		4,714			5,440	5,383	
Number of retired members		1			1	2	
Period 7/1/2010 - 6/30/2011							
Average monthly benefit			1,799	2,676	3,220		
Average HAC ¹			4,354	4,815	5,355		
Number of retired members			2	3	3		
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	490	201		2,688	2,615	3,769	
Average HAC ¹	3,731	4,039		4,638	4,494	4,952	
Number of retired members	1	4		2	3	1	

¹ HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Retirement Effective Dates	Sheriffs' Retirement System Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit	\$ 2,788	\$ 4,459	\$ 2,375	\$ 2,654	\$ 3,528	\$ 5,049	
Average HAC ¹	7,948	11,358	5,393	5,482	5,667	5,743	
Number of retired members	9	12	9	15	6	5	
Period 7/1/2017 - 6/30/2018							
Average monthly benefit	2,598	651	758	5,073	2,940	3,819	6,406
Average HAC ¹	5,197	4,489	3,484	11,366	6,033	5,758	6,886
Number of retired members	1	5	7	8	6	6	1
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	691	1,102	7,149	3,429	5,425	6,681	10,002
Average HAC ¹	6,620	7,553	19,249	8,206	10,888	11,139	13,410
Number of retired members	2	10	14	14	18	4	6
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	2,387	2,464	2,669	5,274	3,000	2,905	4,146
Average HAC ¹	5,026	7,058	7,936	8,886	5,538	4,905	5,596
Number of retired members	3	6	6	11	12	3	2
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	2,050	501	869	2,228	3,224	3,088	2,942
Average HAC ¹	4,100	2,864	2,793	5,059	4,817	5,042	3,913
Number of retired members	1	10	7	9	8	7	3
Period 7/1/2013 - 6/30/2014							
Average monthly benefit	684	507	957	2,261	2,847	2,426	3,786
Average HAC ¹	1,712	3,339	3,627	5,393	5,673	5,549	6,893
Number of retired members	3	8	4	5	6	4	3
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	1,652	618	1,520	1,828	2,945	3,545	5,683
Average HAC ¹	3,559	4,147	4,944	4,423	5,466	4,932	6,428
Number of retired members	1	5	13	5	12	2	1
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	3,764	6,837	1,864	2,762	2,627	3,650	4,214
Average HAC ¹	3,367	3,121	4,944	5,493	4,680	4,873	6,286
Number of retired members	3	6	4	2	9	2	7
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	604	681	1,608	2,888	2,589	4,107	5,814
Average HAC ¹	6,500	4,199	3,890	5,466	4,778	5,912	6,842
Number of retired members	1	4	3	5	12	4	6
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	2,008	1,450	895	1,810	3,363	3,739	4,135
Average HAC ¹	3,464	4,282	3,652	4,674	5,600	4,946	5,878
Number of retired members	1	2	4	2	4	3	1

¹ HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Game Wardens' and Peace Officers' Retirement System														
Years of Credited Service														
Retirement Effective Dates	0-5		5-10		10-15		15-20		20-25		25-30		30+	
Period 7/1/2018 - 6/30/2019														
Average monthly benefit		1,174	\$	729	\$	2,595	\$	1,549	\$	2,387		\$	4,340	
Average HAC ¹		5,146		3,742		7,858		3,891		4,892			6,012	
Number of retired members		1		5		7		6		13			1	
Period 7/1/2017 - 6/30/2018														
Average monthly benefit				613		1,709		1,958		2,577		2,551		
Average HAC ¹				3,572		6,898		4,500		5,114		4,507		
Number of retired members				7		8		8		10		1		
Period 7/1/2016 - 6/30/2017														
Average monthly benefit				1,430		2,211		3,453		4,476				8,210
Average HAC ¹				7,477		7,645		8,747		8,736				9,836
Number of retired members				12		12		14		6				6
Period 7/1/2015 - 6/30/2016														
Average monthly benefit		208		2,422		1,143		3,336		2,316		4,129		6,179
Average HAC ¹		1,684		6,650				8,009		4,839		6,493		8,269
Number of retired members		1		8		2		9		3		1		1
Period 7/1/2014 - 6/30/2015														
Average monthly benefit				607		1,213		1,876		2,106		2,671		3,494
Average HAC ¹				2,792		3,588		3,738		4,100				4,848
Number of retired members				7		10		5		5		1		2
Period 7/1/2013 - 6/30/2014														
Average monthly benefit				745		1,151		1,642		2,564		2,109		
Average HAC ¹				3,470		3,809		4,266		4,490		3,695		
Number of retired members				6		6		10		4		1		
Period 7/1/2012 - 6/30/2013														
Average monthly benefit		2,507		5,232		1,118		1,259		3,630		4,007		
Average HAC ¹		2,695		2,595		3,316		3,820		6,679		5,795		
Number of retired members		4		6		4		7		1		1		
Period 7/1/2011 - 6/30/2012														
Average monthly benefit				643		1,233		1,999						4,003
Average HAC ¹				3,164		3,938		4,027						4,693
Number of retired members				6		6		1						3
Period 7/1/2010 - 6/30/2011														
Average monthly benefit		4,914		625		916		1,337				3,428		3,830
Average HAC ¹		3,063		3,257		3,904		3,368				4,427		4,205
Number of retired members		1		4		6		1				1		1
Period 7/1/2009 - 6/30/2010														
Average monthly benefit		5,706		595		1,286								4,140
Average HAC ¹		2,507		3,039		3,888								4,192
Number of retired members		1		3		6								1

¹ HAC = Highest Average Compensation during any consecutive 36 months or 60 months dependent upon date member was hired.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Retirement Effective Dates	Municipal Police Officers' Retirement System Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit	\$ 106	\$ 3,979	\$ 4,254	\$ 2,599	\$ 3,541	\$ 4,487	10,402
Average FAC ¹	5,877	10,230	9,386	5,206	6,667	7,038	9,403
Number of retired members	6	4	9	3	2	2	1
Period 7/1/2017 - 6/30/2018							
Average monthly benefit	2,200	3,488	5,052	2,873	2,873	3,850	
Average FAC ¹	10,729	9,826	14,364	6,073	3,902	6,172	
Number of retired members	5	6	10	3	8	2	
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	561	6,523	6,893	4,481	5,971	6,727	
Average FAC ¹	12,635	16,836	16,646	8,318	9,959	11,229	
Number of retired members	6	12	10	8	16	2	
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	5,280	3,364	4,183	2,889	3,439	3,233	1,483
Average FAC ¹	10,172	7,777	8,040	4,281	4,851	6,703	3,800
Number of retired members	3	4	4	3	9	2	1
Period 7/1/2014 - 6/30/2015							
Average monthly benefit	379	1,319	1,098	2,590	2,903	4,100	5,062
Average FAC ¹	6,224	3,399	3,707	4,269	4,028	5,486	6,452
Number of retired members	4	4	5	4	13	3	3
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		730	1,801	2,850	3,282	4,264	
Average FAC ¹		3,028	4,826	5,699	5,839	6,655	
Number of retired members		1	3	1	8	1	
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	541	1,202	571	2,309	3,057	3,384	
Average FAC ¹	6,801	4,075	2,093	4,664	5,261	5,516	
Number of retired members	5	3	1	6	17	6	
Period 7/1/2011 - 6/30/2012							
Average monthly benefit	124	1,191	1,247	2,466	3,058		5,701
Average FAC ¹	5,411	4,023	4,289	4,648	5,117		6,411
Number of retired members	2	3	1	1	7		2
Period 7/1/2010 - 6/30/2011							
Average monthly benefit	273	2,315	1,810	2,601	2,942	4,498	
Average FAC ¹	5,617	4,113	4,862	4,884	4,831	5,893	
Number of retired members	3	1	1	4	8	1	
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	1,016	1,334	2,365	2,541	2,218	3,078	6,121
Average FAC ¹	3,905	3,325	4,618	4,541	4,224		6,594
Number of retired members	4	5	4	4	9	1	1

¹ FAC = Final Average Compensation during the last 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average FAC may be blank due to system not requiring this information to be updated when a member retires.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years

Retirement Effective Dates	Firefighters' Unified Retirement System Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 - 6/30/2019							
Average monthly benefit	\$ 234	\$ 3,307	\$ 3,570	\$ 3,632	\$ 5,352	\$ 5,985	
Average HAC ¹		6,614	7,231	6,672	7,547	7,915	
Number of retired members	1	2	1	7	6	2	
Period 7/1/20167- 6/30/2018							
Average monthly benefit		2,355	1,556	5,482	3,572	4,795	4,964
Average HAC ¹		10,401	5,013	11,286	5,913	5,427	5,188
Number of retired members		1	2	3	10	4	4
Period 7/1/2016 - 6/30/2017							
Average monthly benefit	424	7,343		4,131	8,080	9,989	10,844
Average HAC ¹		22,235		8,962	14,939	14,869	13,268
Number of retired members	2	6		6	4	10	16
Period 7/1/2015 - 6/30/2016							
Average monthly benefit	2,240			2,904	6,969	4,741	5,863
Average HAC ¹	4,156			4,628	12,003	6,881	7,202
Number of retired members	2			3	9	4	4
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		1,375	1,634	1,209	1,936	4,621	5,623
Average HAC ¹		1,763	4,444	2,713	5,475	5,367	5,217
Number of retired members		2	1	2	8	4	4
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		1,423	1,819	2,493	3,335	4,176	5,716
Average HAC ¹		5,161	5,865	6,698	5,902	5,931	6,580
Number of retired members		2	1	5	4	2	3
Period 7/1/2012 - 6/30/2013							
Average monthly benefit	1,472	647	1,441		1,219	4,747	6,167
Average HAC ¹	2,859	3,637	4,549		2,175	6,656	6,686
Number of retired members	1	2	2		5	6	5
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		1,304	3,122		2,942	4,077	480
Average HAC ¹		5,946	5,885		5,616	6,638	6,837
Number of retired members		2	1		7	6	5
Period 7/1/2010 - 6/30/2011							
Average monthly benefit		280		2,334	4,127	3,785	4,107
Average HAC ¹		1,506		4,814	5,945	5,075	4,481
Number of retired members		1		1	1	9	5
Period 7/1/2009 - 6/30/2010							
Average monthly benefit	2,074		2,891	260	2,869	3,918	4,282
Average HAC ¹	3,686		4,987	448	4,496	5,146	5,433
Number of retired members	2		1	2	3	4	5

¹ HAC = Highest Average Compensation during any consecutive 36 months.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

The Average HAC may be blank due to system not requiring this information to be updated when a member retires.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Average Benefit Payments, Last Ten Fiscal Years (cont.)

Retirement Effective Dates	Volunteer Firefighters' Compensation Act Years of Credited Service						30+
	0-5	5-10	10-15	15-20	20-25	25-30	
Period 7/1/2018 - 6/30/2019							
Average monthly benefit	\$ 88	\$ 113	\$ 166	\$ 377	\$ 230		265
Average HAC ¹							
Number of retired members		5	15	23	14	7	9
Period 7/1/2017 - 6/30/2018							
Average monthly benefit		88	113	349	194	231	268
Average HAC ¹							
Number of retired members		8	18	18	18	7	8
Period 7/1/2016 - 6/30/2017							
Average monthly benefit		175	238	327	387	464	500
Average HAC ¹							
Number of retired members		8	26	32	34	10	4
Period 7/1/2015 - 6/30/2016							
Average monthly benefit		88	110	160	387	240	269
Average HAC ¹							
Number of retired members		9	25	15	26	10	2
Period 7/1/2014 - 6/30/2015							
Average monthly benefit		75	94	703	172	220	249
Average HAC ¹							
Number of retired members		10	19	21	17	6	4
Period 7/1/2013 - 6/30/2014							
Average monthly benefit		75	94	140	169	210	238
Average HAC ¹							
Number of retired members		9	19	20	15	9	4
Period 7/1/2012 - 6/30/2013							
Average monthly benefit		75	98	143	173	207	253
Average HAC ¹							
Number of retired members		9	22	21	10	10	3
Period 7/1/2011 - 6/30/2012							
Average monthly benefit		75	106	136	169	211	239
Average HAC ¹							
Number of retired members		4	11	28	30	7	5
Period 7/1/2010 - 6/30/2011							
Average monthly benefit		75	96	145	172	211	
Average HAC ¹							
Number of retired members		5	14	24	14	18	
Period 7/1/2009 - 6/30/2010							
Average monthly benefit		76	100	424	168	946	
Average HAC ¹							
Number of retired members		8	21	19	24	12	

¹ HAC = Highest Average Compensation is not applicable to the VFCA. Members are unpaid volunteers and do not contribute to the fund.

The Average monthly benefit could be skewed in this schedule due to retroactive retirement dates.

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STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Average Monthly Benefit Payments, All Retirees

For the Fiscal Year Ended 2019

System	Years of Service	Recipient's Age										Average
		< 45	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Over 80		
PERS-DBRP	0-4	\$ 186	\$ 280	\$ 824	\$ 736	\$ 559	\$ 326	\$ 314	\$ 299	\$ 268	\$ 420	
	5-9	550	397	375	391	381	392	403	384	349	384	
	10-14	601	663	574	627	703	740	738	663	585	684	
	15-19	786	1,083	770	843	1,031	1,134	1,062	1,023	907	1,026	
	20-24	1,018	1,211	1,408	1,244	1,491	1,518	1,537	1,382	1,238	1,426	
	25-29	954	2,005	2,249	2,409	2,552	2,396	2,323	2,028	1,802	2,268	
	30-34		2,658	3,138	3,264	3,390	3,279	3,146	2,762	2,286	3,057	
	35-39			2,898	3,293	3,805	3,980	3,902	3,418	2,874	3,668	
	40-UP			3,392	4,769	4,376	4,433	4,529	4,813	3,802	4,379	
	Average	\$ 603	\$ 1,036	\$ 1,589	\$ 1,853	\$ 1,767	\$ 1,710	\$ 1,624	\$ 1,382	\$ 1,153	\$ 1,531	
JRS	0-4					\$ 5,548					\$ 5,548	
	5-9					2,296	1,680	1,882	2,138	3,236	2,105	
	10-14					3,522	3,454	4,705	4,404	4,233	4,319	
	15-19					4,771	4,214	3,832	5,326	5,481	4,445	
	20-24						6,448	5,897			6,173	
	25-29						7,308	6,450	6,074	6,196	6,465	
	30-34						7,012		8,137	7,727	7,753	
	35-39											
	40-UP											
	Average					\$ 3,643	\$ 5,024	\$ 4,213	\$ 5,610	\$ 5,048	\$ 4,748	
HPORS	0-4	\$ 1,749	\$ 2,275	\$ 1,839	\$ 1,798		\$ 2,095				\$ 1,841	
	5-9	517	2,293		1,551	2,348	2,312	1,850			1,632	
	10-14	1,825	2,614	2,749	1,757	640	1,575	319	405	374	1,446	
	15-19		2,793	2,051	2,168	2,391			1,771	960	2,147	
	20-24	2,415	3,316	3,573	3,197	2,990	2,838	2,465	2,211	2,164	2,813	
	25-29			3,634	4,872	4,460	4,149	3,487	3,185	2,644	3,504	
	30-34					4,246	4,453	4,790	3,948	3,484	4,192	
	35-39						6,283	6,126	5,963	4,432	5,376	
	40-UP									1,964	1,964	
	Average	\$ 1,674	\$ 3,062	\$ 3,220	\$ 3,073	\$ 3,062	\$ 3,348	\$ 3,253	\$ 2,941	\$ 2,594	\$ 2,720	
SRS	0-4	\$ 1,589	\$ 3,988	\$ 2,242	\$ 1,554	\$ 1,450	\$ 583	\$ 1,334		\$ 515	\$ 1,537	
	5-9	1,163	1,463	1,327	825	688	894	686	687	837	854	
	10-14	3,451	2,481	936	1,093	1,281	1,445	1,143	1,520	1,168	1,368	
	15-19	2,629	2,522	2,282	2,172	2,280	2,021	1,844	1,854	1,078	2,152	
	20-24		2,876	3,064	2,870	2,928	2,897	2,730	2,308	1,547	2,833	
	25-29		3,860	3,782	3,649	3,920	3,989	3,822	3,247	2,208	3,562	
	30-34			5,178	5,255	5,895	5,415	4,046	4,534	1,630	5,000	
	35-39					4,334	5,600	5,399	5,205	3,825	4,967	
	40-UP					6,598					6,598	
	Average	\$ 2,170	\$ 2,794	\$ 2,436	\$ 2,344	\$ 2,470	\$ 2,586	\$ 2,354	\$ 2,496	\$ 1,562	\$ 2,198	

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Average Monthly Benefit Payments, All Retirees

For the Fiscal Year Ended 2019

System	Years of Service	Recipient's Age									Average
		< 45	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Over 80	
GWPORS	0-4			\$ 1,398		\$ 680	\$ 325	\$ 620			\$ 763
	5-9		970	800	712	719	639	834	668		726
	10-14			762	1,063	1,314	1,342	1,278	1,298	1,882	1,258
	15-19	764	648	2,070	1,708	1,966	2,002	1,838	1,431	896	1,832
	20-24			2,663	2,427	2,431	2,460	2,238	2,010	2,013	2,442
	25-29			2,958	3,443	4,152	2,628	2,903	2,405	2,162	2,875
	30-34			4,340	4,042	4,282	4,023	4,005	2,719	3,180	3,730
	35-39					4,921	5,310	3,667	3,851	3,876	4,531
	40-UP							5,148			5,148
	Average	\$ 764	\$ 863	\$ 2,318	\$ 1,458	\$ 2,068	\$ 1,596	\$ 1,927	\$ 1,952	\$ 2,662	\$ 1,746
MPORS	0-4	\$ 2,340	\$ 2,174	\$ 1,644	\$ 287	\$ 647	\$ 445	\$ 1,213	\$ 975	\$ 1,872	\$ 989
	5-9	2,281	2,546	1,344	977	1,112	1,721	1,270	1,914	2,187	1,683
	10-14	2,146	2,923	1,539	1,816	2,091	1,917	2,049	1,851	2,253	2,003
	15-19	2,839	2,851	2,492	2,633	2,720	2,375	2,413	2,101	2,251	2,538
	20-24	3,357	3,478	3,111	3,451	3,034	2,802	2,874	2,485	2,317	2,915
	25-29		5,802	3,692	5,007	4,188	4,900	4,944	3,691	3,229	4,399
	30-34			4,799	5,593	5,669	5,659	6,835	5,382	3,274	5,577
	35-39						5,443			3,222	4,332
	40-UP						10,402				10,402
	Average	\$ 2,370	\$ 3,070	\$ 2,502	\$ 2,770	\$ 2,619	\$ 2,845	\$ 3,142	\$ 2,654	\$ 2,463	\$ 2,430
FURS	0-4	\$ 2,077		\$ 220	\$ 1,117	\$ 2,746	\$ 1,657	\$ 2,311			\$ 1,635
	5-9	2,386	2,494	2,560	1,146	1,012	1,258	1,631	2,459		1,617
	10-14	2,621	1,970	2,279	2,111	1,916	2,139	1,225	2,036	2,573	2,079
	15-19	2,903	2,374	2,840	2,589	2,247	2,385	1,867	1,702	2,066	2,291
	20-24	2,898	3,933	2,800	3,270	3,109	2,794	2,515	2,157	1,980	2,691
	25-29			3,980	4,808	4,341	4,017	4,147	3,321	2,210	3,791
	30-34			3,442	5,790	5,741	5,919	5,455	5,340	3,103	5,408
	35-39					6,818	7,637	6,257	4,561	4,556	5,864
	40-UP								281	280	280
	Average	\$ 2,447	\$ 2,930	\$ 2,883	\$ 3,694	\$ 3,735	\$ 3,811	\$ 3,752	\$ 3,196	\$ 2,387	\$ 3,129
VFCA	0-4					\$ 88		\$ 166			\$ 127
	5-9									105	105
	10-14					105	100	101	101	100	101
	15-19					146	147	144	147	146	146
	20-24				185	183	184	182	182	183	183
	25-29				222	225	226	223	229	221	225
	30-34				262	256	254	253	253	250	255
	35-39				288	306	273	250		250	268
	40-UP										
	Average				\$ 205	\$ 179	\$ 167	\$ 162	\$ 161	\$ 156	\$ 167

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers

Current Year and Nine Years Ago

	As of June 30, 2019			As of June 30, 2010		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
Participating Government						
PERS - DBRP						
STATE OF MONTANA ²	9,929	1	35.25	10,777	1	36.96
UNIVERSITY OF MONTANA	1,211	2	4.30	1,269	2	4.35
MONTANA STATE UNIVERSITY - BOZEMAN	1,072	3	3.81	1,002	3	3.44
MISSOULA COUNTY	681	4	2.42	603	4	2.07
CITY OF BILLINGS	584	5	2.07	566	5	1.94
SCHOOL DISTRICT 2 - BILLINGS	429	6	1.52	373	8	1.28
FLATHEAD COUNTY	402	7	1.43	396	7	1.36
CITY OF MISSOULA	385	8	1.37			
BUTTE SILVERBOW	356	9	1.26			
GALLATIN COUNTY	340	10	1.21			
CITY OF GREAT FALLS	340	10	1.21	359	9	1.23
GREAT FALLS PUBLIC SCHOOLS	317	13	1.13	427	6	1.46
"All other" *	12,118		43.02	13,383		45.91
Total (514 Employers)	28,164		100.00	29,155		100.00

* In 2019, "all other" consisted of:

Type	Number	Employees
Cities & Towns	94	1,902
Counties	52	4,042
Other Agencies	112	1,171
School Districts	241	4,686
Universities	3	317
Total	502	12,118

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the State of Montana is considered one employer. There are a total of 33 State of Montana agencies reporting to PERS-DBRP.

A ten year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

Participating Government	As of June 30, 2019			As of June 30, 2010		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
JRS						
STATE OF MONTANA ²	57	1	100.00	51	1	100.00
TOTAL (1 EMPLOYER)	57		100.00	51		100.00
HPORS						
STATE OF MONTANA ²	229	1	100.00	231	1	100.00
TOTAL (1 EMPLOYER)	229		100.00	231		100.00
SRS						
MISSOULA COUNTY	149	1	10.48	117	1	9.77
YELLOWSTONE COUNTY	130	2	9.14	103	2	8.60
CASCADE COUNTY	115	3	8.09	91	4	7.60
GALLATIN COUNTY	106	4	7.45	71	5	5.93
FLATHEAD COUNTY	92	5	6.47	103	3	8.60
LEWIS & CLARK COUNTY	72	6	5.06	59	6	4.93
STATE OF MONTANA ²	59	7	4.15	51	7	4.26
RAVALLI COUNTY	50	8	3.52	42	9	3.51
DAWSON COUNTY	41	9	2.88	45	8	3.76
LAKE COUNTY	41	10	2.88	40	10	3.34
In 2019 "All other" consists of 47 Counties	567		39.88	455		39.70
TOTAL (57 EMPLOYERS)	1,422		100.00	1,197		100.00
GWPORS						
STATE OF MONTANA ²	954	1	95.78	943	1	96.32
MONTANA STATE UNIVERSITY - BOZEMAN	22	2	2.21	16	2	1.63
UNIVERSITY OF MONTANA	14	3	1.41	13	3	1.33
MONTANA STATE UNIVERSITY - BILLINGS	6	4	0.60	7	4	0.72
TOTAL (4 EMPLOYERS)	996		100.00	979		100.00

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the State of Montana is considered one employer. For JRS, HPORS and SRS there is only one State of Montana agency. There are four State of Montana agencies reporting under GWPORS.

A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

Participating Government	As of June 30, 2019			As of June 30, 2010		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
MPORS						
CITY OF BILLINGS	151	1	18.97	140	1	19.23
CITY OF MISSOULA	105	2	13.19	99	2	13.60
CITY OF GREAT FALLS	85	3	10.68	82	3	11.26
CITY OF BOZEMAN	61	4	7.66	53	4	7.28
CITY OF HELENA	54	5	6.78	48	5	6.59
BUTTE SILVER BOW	49	6	6.16	47	6	6.46
CITY OF KALISPELL	39	7	4.90	35	7	4.81
CITY OF WHITEFISH	21	8	2.64	18	10	2.47
ANACONDA-DEER LODGE COUNTY	20	9	2.51	20	8	2.75
CITY OF HAVRE	17	10	2.14	19	9	2.61
All Others	194		24.37	167		22.94
TOTAL (33 EMPLOYERS)	796		100.00	728		100.00
FURS						
CITY OF BILLINGS	121	1	17.34	112	1	19.48
CITY OF MISSOULA	90	2	12.89	89	2	15.48
CITY OF GREAT FALLS	67	3	9.60	65	3	11.30
MISSOULA RURAL FIRE DISTRICT	44	4	6.30	26	8	4.52
CITY OF BOZEMAN	43	5	6.16	42	4	7.30
CITY OF HELENA	40	6	5.73	35	5	6.09
BUTTE SILVER BOW	38	7	5.44	31	6	5.39
CENTRAL VALLEY FIRE DISTRICT	33	8	4.73			
CITY OF KALISPELL	29	9	4.15	30	7	5.22
STATE OF MONTANA ²	25	10	3.58			
CITY OF WHITEFISH	18	12	2.58	17	10	2.96
CITY OF HAVRE	17	13	2.44	17	9	2.96
All Others	133		19.06	111		19.30
TOTAL (27 EMPLOYERS)	698		100.00	575		100.00

VFCA

Participating employers is not applicable to VFCA because members are unpaid volunteers. In 2019, there were 239 VFCA qualified volunteer fire departments.

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the State of Montana is considered one employer. For FURS there is only one State of Montana agency.

A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

Public Employees' Retirement Board

A Component Unit of the State of Montana

Principal Participating Employers (cont.)

Current Year and Nine Years Ago

	As of June 30, 2019			As of June 30, 2010		
	Covered Employees ¹	Rank	Percentage of Total System	Covered Employees ¹	Rank	Percentage of Total System
Participating Government						
PERS-DCRP						
STATE OF MONTANA ²	1,385	1	48.53	953	1	47.2
YELLOWSTONE CITY-COUNTY HEALTH DEPT	90	2	3.15	41	5	2.03
UNIVERSITY OF MONTANA	74	3	2.59	51	3	2.53
MISSOULA COUNTY	72	4	2.52	50	4	2.48
CITY OF BILLINGS	70	5	2.45	57	2	2.82
MONTANA STATE UNIVERSITY - BOZEMAN	68	6	2.38	36	7	1.78
CITY OF MISSOULA	43	7	1.51			
GALLATIN COUNTY	33	8	1.16	29	8	1.44
CITY OF BOZEMAN	30	9	1.05	26	10	1.29
YELLOWSTONE COUNTY	28	10	0.98	29	9	1.44
FLATHEAD COUNTY	26	11	0.91	36	6	1.78
All Others	935		32.77	711		35.21
TOTAL (287 EMPLOYERS)	2,854		100.00	2,019		100.00

* In 2019, "all other" consisted of:

Type	Number	Employees
Cities & Towns	51	169
Counties	48	304
Other Agencies	48	118
School Dist	126	335
Universities	3	9
Total	276	935

Deferred Compensation Plan

STATE OF MONTANA ²	4,752	1	85.73	4,306	1	90.46
CITY OF HELENA	126	2	2.27			
UNIVERSITY OF MONTANA	113	3	2.04	128	2	2.69
LEWIS & CLARK COUNTY	110	4	1.98	108	3	2.27
MONTANA STATE UNIVERSITY - BOZEMAN	72	5	1.30	88	4	1.85
FALLON COUNTY	48	6	0.87			
GREAT FALLS TRANSIT	33	7	0.60	33	5	0.69
SANDERS COUNTY	28	8	0.51			
SCHOOL DISTRICT 2 - BILLINGS	18	9	0.32			
SCHOOL DISTRICT 6 - WIBAUX	17	10	0.31			
MONTANA STATE UNIVERSITY- BILLINGS	17	10	0.31	16	6	0.34
CITY OF COLSTRIP	11	14	0.20	11	8	0.23
BIG SKY CO WATER & SEWER DIST # 363	10	15	0.18	8	9	0.17
MONTANA STATE UNIVERSITY- NORTHERN	6	25	0.11	13	7	0.27
All Others	182		3.27	49		1.03
TOTAL (52 EMPLOYERS)	5,543		100.00	4,760		100.00

* In 2019, "all other" consisted of:

Type	Number	Employees
Cities & Towns	12	46
Counties	3	22
Other Agencies	11	43
School Dist	11	65
Universities	1	6
Total	38	182

¹ Employee counts are based on June payrolls. Differences in employee counts in this schedule as compared to other CAFR schedules are due to members with multiple employers, June 30th refunded members and members with dual retirement system elections.

² For the purposes of this schedule the State of Montana is considered one employer. There are a total of 31 State of Montana agencies reporting to PERS-DCRP.

A ten-year analysis may not be available for all employers, due to the employer not being a participating employer at the time.

STATISTICAL SECTION

Public Employees' Retirement Board

A Component Unit of the State of Montana

Schedule of Participating Employers

As of June 30, 2019

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

State Agencies (33)

Board of Public Education	P						DC	
Commissioner of Higher Education	P						DC	
Commissioner of Political	P							
Consumer Council	P						DC	
Dept of Administration	P						DC	
Dept of Agriculture	P						DC	
Dept of Commerce	P						DC	
Dept of Corrections	P	G					DC	
Dept of Environmental Quality	P						DC	
Dept of Fish, Wildlife & Parks	P	G					DC	
Dept of Justice	P		H	S			DC	
Dept of Labor & Industry	P						DC	
Dept of Livestock	P	G					DC	
Dept of Military Affairs	P					F	DC	
Dept of Natural Resources &	P						DC	
Dept of Public Health & Human	P						DC	
Dept of Revenue	P						DC	
Dept of Transportation	P	G					DC	

Governor's Office	P						DC	
Legislative Council	P						DC	
Montana Arts Council	P							
Montana Historical Society	P						DC	
Montana State Fund	P						DC	
Montana State Library	P						DC	
Office of Public Defender	P						DC	
Office of Public Instruction	P						DC	
Public Employee Retirement	P						DC	
Public Service Commission	P						DC	
School for the Deaf & Blind	P						DC	
Secretary of State	P						DC	
State Auditor's Office	P						DC	
Supreme Court	P	J					DC	
Teachers' Retirement System	P						DC	
*State of Montana								D

*For purposes of this schedule "State of Montana" for 457 Plan includes all State Agencies. Due to the nature of reporting for the 457 plan, we are unable to specifically determine which agencies have participating employers.

Counties (55)

Anaconda-Deer Lodge	P			S	M	F	DC	
Beaverhead	P			S			DC	
Big Horn	P			S			DC	
Blaine	P			S			DC	
Broadwater	P			S			DC	
Carbon	P			S			DC	
Carter	P			S			DC	D
Cascade	P			S			DC	
Chouteau	P			S			DC	
Custer	P			S			DC	
Daniels	P			S			DC	
Dawson	P			S			DC	
Fallon	P			S			DC	D
Fergus	P			S			DC	
Flathead	P			S			DC	
Gallatin	P			S			DC	
Garfield	P			S			DC	
Glacier	P			S			DC	
Golden Valley	P			S			DC	D
Granite	P			S			DC	
Hill	P			S			DC	
Jefferson	P			S			DC	
Judith Basin	P			S				
Lake	P			S			DC	
Lewis & Clark	P			S			DC	D
Liberty	P			S			DC	
Lincoln	P			S			DC	
Madison	P			S			DC	
McCone	P			S			DC	
Meagher	P			S			DC	
Mineral	P			S			DC	

Missoula	P			S			DC	
Musselshell	P			S			DC	
Park	P			S			DC	
Petroleum	P			S			DC	
Phillips	P			S			DC	
Pondera	P			S				
Powder River	P			S			DC	
Powell	P			S			DC	
Prairie	P			S			DC	
Ravalli	P			S			DC	
Richland	P			S			DC	
Roosevelt	P			S			DC	
Rosebud	P			S			DC	
Sanders	P			S			DC	D
Sheridan	P			S			DC	
Stillwater	P			S			DC	
Sweet Grass	P			S			DC	D
Teton	P			S			DC	
Toole	P			S			DC	
Treasure	P			S			DC	
Valley	P			S			DC	
Wheatland	P			S				
Wibaux	P			S				
Yellowstone	P			S			DC	

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

Cities & Towns (98)													
Alberton	P											DC	
Baker	P					M							
Belgrade	P					M						DC	
Belt	P												
Big Sandy	P												
Big Timber	P											DC	
Billings	P					M	F					DC	
Boulder	P												
Bozeman	P					M	F					DC	
Bridger	P											DC	
Broadus	P												
Butte-Silver Bow	P					S	M	F				DC	
Cascade	P												
Chester	P											DC	D
Chinook	P											DC	
Choteau	P												
Circle	P											DC	
Colstrip	P											DC	D
Columbia Falls	P					M	F					DC	
Columbus	P					M						DC	
Conrad	P											DC	
Culbertson	P												
Cut Bank	P					M							
Deer Lodge	P											DC	
Denton	P											DC	
Dillon	P					M						DC	
Drummond	P												
East Helena	P					M						DC	D
Ekalaka	P												D
Ennis	P											DC	
Eureka	P											DC	
Fairfield	P											DC	D
Fairview	P											DC	D
Forsyth	P											DC	
Fort Benton	P					M							
Fort Peck	P												
Froid	P												
Geraldine	P												
Glasgow	P					M						DC	
Glendive	P					M	F					DC	
Grass Range	P												
Great Falls	P					M	F					DC	
Hamilton	P					M						DC	
Hardin	P											DC	D
Harlem	P												
Harlowton	P											DC	
Havre	P					M	F					DC	
Helena	P					M	F					DC	D
Hot Springs	P											DC	
Hysham	P												
Kalispell	P					M	F					DC	
Laurel	P					M						DC	
Lewistown	P					M	F					DC	
Libby	P					M						DC	
Lima	P												
Livingston	P					M	F					DC	
Malta	P											DC	
Manhattan	P											DC	
Medicine Lake	P												
Melstone	P												
Miles City	P					M	F					DC	
Missoula	P					M	F					DC	
Moore	P												
Nashua	P												
Phillipsburg	P											DC	
Plains	P									M			
Plentywood	P												
Polson	P									M		DC	D
Poplar	P											DC	D
Red Lodge	P									M		DC	
Richey	P												
Ronan	P											DC	
Roundup	P												
Ryegate	P												
Saco	P												
Scobey	P											DC	
Shelby	P											DC	
Sheridan	P												D
Sidney	P											DC	D
St Ignatius	P												
Stanford	P												
Stevensville	P											DC	
Sunburst	P												
Superior	P												
Terry	P												
Thompson Falls	P									M		DC	D
Three Forks	P												
Townsend	P											DC	
Troy	P									M			D
Twin Bridges	P											DC	
Valier	P												
Westby	P												
West Yellowstone	P									M		DC	
White Sulphur Springs	P											DC	
Whitefish	P									M	F	DC	
Wibaux	P												
Winnett	P												
Wolf Point	P									M		DC	

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

Colleges & Universities (5)									
Montana State University - Billings	P		G					DC	D
Montana State University - Bozeman	P		G					DC	D
Montana State University College of Technology - Great Falls	P							DC	D
Montana State University - Northern	P							DC	D
University of Montana - Missoula	P		G					DC	D
High Schools (5)									
Beaverhead County	P							DC	
Jefferson County	P							DC	
Powder River County	P							DC	
Powell County	P							DC	
Sweet Grass County	P							DC	
School Districts (238)									
SD 1, Big Timber	P							DC	
SD 1, Butte	P							DC	
SD 1, Choteau	P								
SD 1, Circle	P							DC	
SD 1, Clancy	P							DC	
SD 1, Corvallis	P							DC	
SD 1, Deer Lodge	P							DC	
SD 1, Fort Benton	P							DC	
SD 1, Glasgow	P							DC	
SD 1, Glendive	P							DC	
SD 1, Heart Butte	P								
SD 1, Helena	P							DC	D
SD 1, Lewistown	P							DC	
SD 1, Miles City	P							DC	
SD 1, Missoula	P							DC	
SD 1, Phillipsburg	P								
SD 1, Plains	P								
SD 1, Red Lodge	P								
SD 1, Scooby	P							DC	
SD 1, Troy	P								
SD 1, West Valley School	P								
SD 1 & 7 Hysham	P							DC	
SD 1 & 7, Townsend	P							DC	
SD 2, Alberton	P								
SD 2, Alder	P								
SD 2, Billings	P							DC	D
SD 2, Bridger	P								
SD 2, Deer Park	P							DC	
SD 2, Dodson	P							DC	
SD 2, Dupuyer	P								
SD 2, Frazer	P								
SD 2, Lavina K-12	P								
SD 2, Stevensville	P							DC	
SD 2, Sunburst	P							DC	
SD 2, Thompson Falls	P								
SD 2 & 3, Pryor	P								
SD 2 & 11, Big Sandy	P								
SD 2 & 27, Lodge Grass	P								
SD 3, Belfry	P							DC	
SD 3, Billings	P								
SD 3, Cascade	P							DC	
SD 3, Fairmont Egan	P								
SD 3, Hamilton	P							DC	
SD 3, Manhattan	P								
SD 3, Ramsay	P								
SD 3, Superior	P							DC	
SD 3, Westby	P							DC	
SD 3, Wolf Point	P							DC	D
SD 3 & 13, Fairview	P							DC	
SD 4, Canyon Creek	P								
SD 4, Divide	P								
SD 4, Forsyth	P								D
SD 4, Hellgate	P							DC	
SD 4, Libby	P								
SD 4, Livingston	P								DC
SD 4, Swan River	P								
SD 4, Trinity	P								
SD 4 & 28, Highwood	P								DC
SD 4 & 47, Whitehall	P								
SD 5, Basin	P								
SD 5, Kalispell	P								DC
SD 5, Melrose	P								
SD 5, Park City	P								DC
SD 5, Sand Coulee	P								DC
SD 5, Sheridan	P								DC
SD 5, Sidney	P								DC
SD 5, Terry	P								DC
SD 6, Columbia Falls	P								DC
SD 6, Columbus	P								DC
SD 6, Lame Deer	P								DC
SD 6, Ryegate	P								DC D
SD 6, Trout Creek	P								
SD 6, Wibaux	P								D
SD 6 & 1, St Regis	P								DC
SD 7, Boulder	P								DC
SD 7, Bozeman	P								DC
SD 7, Charlo	P								DC
SD 7, Gardiner	P								DC
SD 7, Grant	P								
SD 7, Hinsdale	P								DC
SD 7, Joliet	P								DC D
SD 7, Lolo	P								DC
SD 7, Medicine Lake	P								DC D
SD 7, Twin Bridges	P								DC
SD 7, Victor	P								
SD 7 & 2, Savage	P								DC
SD 7 & 70, Laurel	P								DC
SD 8, Arlee	P								DC
SD 8, Elder Grove	P								DC
SD 8, West Glacier	P								
SD 8, White Sulphur Springs	P								
SD 9, Browning	P								DC
SD 9, Creston	P								
SD 9, Darby	P								DC
SD 9, Dixon	P								
SD 9, East Helena	P								DC D
SD 9, Opheim	P								
SD 9, Poplar	P								DC D
SD 9 & 9, Reed Point	P								
SD 10, Anaconda	P								DC
SD 10, Cayuse	P								
SD 10, Chinook	P								
SD 10, Conrad	P								DC
SD 10, Dillon	P								DC
SD 10, Noxon	P								DC
SD 11, Brorson	P								
SD 11, Ovando Elementary School	P								
SD 11, Potomac	P								
SD 11, Wise River	P								
SD 11 & 2, Drummond	P								
SD 12, Baker	P								D
SD 12, Harlem	P								DC
SD 12, Havre	P								
SD 12, Lima	P								DC
SD 12, Rosebud	P								
SD 12, Saco	P								DC
SD 12, Stanford	P								
SD 12 & 12, Molt	P								
SD J12-5, Shields Valley	P								

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

School Districts (continued)													
SD 13, Box Elder	P												
SD 13, Eureka	P											DC	
SD 13, Fishtail	P												
SD 13, Lone Rock	P											DC	
SD 13, Nashua	P												
SD 14, Bonner	P											DC	
SD 14, Fortine	P											DC	
SD 14, Hot Springs	P												
SD 14, Malta	P											DC	
SD 14, Shelby	P												
SD 15, Custer	P											DC	
SD 15, Cut Bank	P											DC	
SD 15, Ekalaka	P											DC	D
SD 15, Kalispell	P											DC	
SD 15 & 6, Florence-Carlton	P											DC	
SD 15 & 17, Willow Creek	P												
SD 16, Harlowton	P											DC	
SD 17, Culbertson	P											DC	
SD 17, Morin	P												
SD 17H, Hardin	P											DC	
SD 18, Valier	P												
SD 18, Woodman	P												
SD 19, Colstrip	P											DC	
SD 20, DeSmet	P											DC	
SD 20, Garrison	P												
SD 20, Kila	P												
SD 20, Plentywood	P											DC	
SD 20, Whitewater	P												
SD 21, Broadview	P												
SD 21, Fairfield	P												
SD 21, Galata	P											DC	
SD 22, Cottonwood	P												
SD 23, Billings	P												
SD 23, Harrison	P												
SD 23, Lustre	P												
SD 23, Missoula	P											DC	
SD 23, Polson	P											DC	
SD 23, Roberts	P												
SD 24, Huntley Project	P											DC	
SD 24, Three Forks	P											DC	
SD 25, Hobson	P											DC	
SD 26, Lockwood	P											DC	
SD 26, Reichle	P												
SD 27, Elliston	P											DC	
SD 27, Grass Range	P												
SD 27, Monforton	P												
SD 27, Montana City	P												
SD 28, St. Ignatius	P											DC	
SD 28C, Dutton	P												
SD 29, Belt	P												
SD 29, Somers	P												
SD 29, Wyola	P												
SD 30, Power	P												
SD 30, Ronan	P											DC	
SD 30 & 6, Fromberg	P											DC	
SD 31, Stillwater County - Nye	P												
SD 32, Clinton	P											DC	
SD 32, Rapelje	P											DC	
SD 32J, Ashland	P											DC	
SD 33, Gold Creek	P												
SD 33, Swan Valley Elem	P												
SD 34, Seeley Lake	P												
SD 35, Gallatin Gateway	P												
SD 37, Shepherd	P											DC	
SD 38, Big Fork	P											DC	
SD 38, Lincoln	P											DC	
SD 40, Frenchtown	P												DC
SD 41, Anderson	P												DC
SD 41, Pioneer	P												
SD 43, Lamotte	P												
SD 43, Turner	P												DC
SD 44, Belgrade	P												DC
SD 44, Geraldine	P												DC
SD 44, Moore	P												D
SD 44, Whitefish	P												
SD 45, Augusta	P												
SD 45, Golden Ridge	P												
SD 45, Wolf Point	P												DC
SD 47, Malmborg	P												
SD 48-1J & 48-2J, Chester	P												
SD 50, East Glacier	P												DC
SD 50, Evergreen	P												DC
SD 50, Hays	P												
SD 52, Absarokee	P												DC
SD 52, Ennis	P												DC
SD 52, Independent	P												DC
SD 55, Brockton	P												
SD 55, Plevna	P												DC
SD 55, Roundup	P												DC
SD 55F, Sun River Valley	P												
SD 57, Havre	P												
SD 58, Geyser	P												
SD 58, Whitefish	P												
SD 58, Yellowstone	P												
SD 64, Bainville	P												DC
SD 64J, Melstone	P												
SD 65, Froid	P												
SD 69, West Yellowstone	P												DC
SD 72, Big Sky	P												DC
SD 73, Swan Lake	P												
SD 74, Roy	P												DC
SD 74, Vaughn	P												DC
SD 75, Amsterdam	P												
SD 75, Arrowhead	P												
SD 75, Greenfield	P												
SD 78J & 2, Richey	P												DC
SD 84, Denton	P												
SD 85, Ulm	P												DC
SD 86 & 4, Lambert	P												
SD 87, Rocky Boy	P												
SD 89, Smith Valley	P												DC
SD 99, North Star Schools	P												
SD 104, Spring Creek	P												
SD 115, Winifred	P												
SD 159, Winnett	P												
Great Falls Public Schools	P												DC
Jordan Public Schools	P												
Judith Gap Schools	P												
Havre Public Schools	P												DC
													D

STATISTICAL SECTION

Schedule of Participating Employers (continued)

*P - Defined Benefit PERS *J - Judges *G - Game Wardens *H - Highway Patrol *S - Sheriffs *M - Police *F - Firefighters
*DC - Defined Contribution PERS *D - 457

Other Agencies (121)														
Anaconda Housing Authority	P													
Arlee-Lake County Water & Sewer	P													
Bear Paw Cooperative	P													
Bert Mooney Airport Authority	P												DC	
Big Country Educational Cooperative	P													
Big Fork County Water & Sewer	P													
Big Horn Cemetery District #1	P													
Big Sky County Water & Sewer District #363	P												DC	D
Big Sky Resort Area District														D
Big Sky Economic Development Authority	P												DC	
Big Sky Fire Department	P												DC	
Big Sky Special Education Cooperative	P													
Billings Housing Authority	P												DC	D
Bitterroot Conservation District	P													
Bitterroot Public Library	P												DC	
Bitterroot Valley Special Education Cooperative													DC	D
Buffalo Rapids Irrigation District #1	P													
Buffalo Rapids Irrigation District #2	P													
Butte Housing Authority	P												DC	
Cascade County Conservation District	P													
Center for Mental Health	P													
Central Montana Learning Resource Ctr	P												DC	
Central Valley Fire District	P													
Chouteau County Conservation District	P													
Colstrip Park & Recreation Districts														D
Corvallis County Sewer District	P													
Crown Hill Cemetery District	P													
Daly Ditches Irrigation District	P												DC	
Dawson County Urban Transportation District	P													
Dawson Community College	P												DC	
Deer Lodge County Head Start Program	P													
Drummond School & Community Library District	P													
Dry Prairie Rural Water District	P													
Dry Redwater Regional Water Authority	P													
Eastern Yellowstone County Special Education Cooperative	P													
Fallon Medical Complex	P													
Fergus County Conservation District	P													
Flathead County Special Education Cooperative													DC	
Flathead Conservation District	P												DC	D
Flathead Emergency Communications Center	P												DC	
Flathead Municipal Airport Authority	P												DC	
Flathead Valley Community College	P												DC	
Lewis & Clark Library	P													DC
Liberty County Conservation District	P													
Lincoln Conservation District	P													
Lincoln County Rural Fire District	P													
Lockwood Rural Fire District #8	P													
Lockwood Water & Sewer District	P													DC
Madison Conservation District	P													DC
Malta Cemetery District	P													
Malta Irrigation District	P													
Meagher County Conservation District														DC
Miles Community College	P													DC
Milk River Joint Board Control	P													
Missoula Area Special Education Cooperative	P													
Missoula County Airport	P													DC
Missoula Rural Fire District	P													DC
North Central Learning Special Education Cooperative	P													
North Lake County Public Library	P													DC
North Valley Public Library District	P													D
Northern Montana Joint Refuse Disposal District	P													DC
Northwest Montana Education Cooperative	P													D
Pablo-Lake County Water District	P													
Park County Rural Fire District #1	P													
Park County Special Education Cooperative	P													
Petroleum County Conservation District	P													
Phillips Conservation District	P													DC
Pondera County Canal & Reservoir	P													DC
Pondera County Cemetery District 2	P													
Pondera Regional Port Authority	P													
Port of Montana — Port Authority	P													
Prairie County Hospital District	P													DC
Prairie View Special Services Coop														DC
Prickley Pear Special Services Cooperative	P													DC
Rae Water & Sewer District	P													
Red Lodge Rural Fire District 7	P													DC
Richland County Housing Authority	P													DC
Riverside County Water & Sewer District No. 310	P													
Ronan Library District	P													
Roundup Community Library	P													
Sanders Special Education Cooperative	P													
Seeley Lake Missoula County Water District	P													DC
Seeley Lake Rural Fire District	P													
Sheridan-Daniels Special Education Cooperative														DC

STATISTICAL SECTION

Fort Shaw Irrigation District	P								DC	
Frenchtown Rural Fire District	P									
Gallatin Airport Authority	P								DC	D
Gallatin Conservation District	P									
Gallatin-Madison Special Education Cooperative	P									
Gardiner-Park County Water District	P									
Glasgow Housing Authority	P									
Glasgow Irrigation District	P								DC	
Granite County Hospital & Nursing Home	P								DC	
Granite Conservation District	P									
Great Divide Education Services	P									
Great Falls International Airport	P								DC	
Great Falls Transit										D
Greenfields Irrigation District	P								DC	
Hebgen Basin Rural Fire	P									
Helena Housing Authority	P								DC	D
Helena Regional Airport Authority	P								DC	D
Helena Valley Irrigation District	P									
Hill County Public Cemetery District	P								DC	
Hinsdale Water and Sewer District	P									
Human Resources Council District XI	P								DC	
Human Resources Council District XII	P								DC	
Hyalite Rural Fire District									DC	
Judith Basin Conservation District	P									
Lakeside County Water & Sewer	P									D
Larchmont Golf Course	P									
Lewis & Clark Conservation District	P									

Sidney-Richland Airport Authority	P									
Somers County Water & Sewer District	P								DC	
Teton County Conservation District	P									
Thompson Falls Public Library	P								DC	
Upper Musselshell Conservation District	P									
Valley County Conservation District	P									
Victor Water & Sewer	P									
Whitefish Housing Authority	P									
Yellowstone City-County Health Dept	P								DC	
Yellowstone-West Carbon Special Education Cooperative	P									
Rural Fire Districts (11)										
Big Mountain Fire District									F	
Big Sky Fire Department									F	
Central Valley Fire District									F	
Columbus Rural Fire District #3									F	
Frenchtown Rural Fire District									F	
Hebgen Basin Rural Fire District									F	
Hyalite Rural Fire District									F	
Lockwood Rural Fire District #8									F	
Missoula Rural Fire District									F	
Red Lodge Rural Fire District 7									F	
Seeley Lake Rural Fire District									F	

Volunteer Fire Departments (239)

This list includes all qualified departments with MPERA under MCA 19.17.109

Absarokee Volunteer Fire Dept	Fisher River Fire Service Area	Plains/Paradise Rural Volunteer Fire Dept
Absarokee-Nye Volunteer Fire Dept	Floral Park Volunteer Fire Dept	Plentywood Rural Volunteer Fire Dept
Alder Volunteer Fire Dept	Florence Volunteer Fire Dept	Plevna Volunteer Fire Dept
Amsterdam Rural Volunteer Fire Dept	Fort Benton Rural Volunteer Fire Dept	Polson Rural Fire Company
Arlee Volunteer Fire Dept	Fort Ellis Rural Volunteer Fire Company	Power Rural Volunteer Fire Dept
Ashland Volunteer Fire Dept	Fort Shaw Rural Volunteer Fire Dept	Racetrack Valley Fire District
Augusta Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 1	Racetrack Volunteer Fire Dept
Avon Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 2	Red Lodge Rural Volunteer Fire Dept, Company 1
Bad Rock Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 3	Red Lodge Luther Company 2
Bainville Volunteer Fire Dept Dist #64	Frenchtown Rural Volunteer Fire Dept, Station 4	Redstone Rural Volunteer Fire Dept
Baker Rural Volunteer Fire Dept	Frenchtown Rural Volunteer Fire Dept, Station 5	Roberts Rural Fire District #6
Basin Volunteer Fire Dept	Gallatin Gateway Rural Volunteer Fire Dept	Rocker Volunteer Fire Dept
Baxendale Volunteer Fire Dept	Gallatin River Ranch Rural Fire District	Rollins Volunteer Fire Dept
Bear Paw Volunteer Fire Dept	Garrison Volunteer Fire Dept	Ronan Volunteer Fire Dept, Station 1
Belfry Volunteer Fire Dept	Gateway Hose Volunteer Fire Company	Ronan Volunteer Fire Dept, Station 2 (Pablo)
Belt Rural Volunteer Fire Dept	Georgetown Lake Fire Service Area	Rudyard Volunteer Fire Dept
Big Arm Volunteer Fire Company	Geraldine Volunteer Fire Dept	Sand Coulee Volunteer Fire Dept
Big Butte Volunteer Fire Dept	Gore Hill Volunteer Fire Dept	Savage Volunteer Fire Dept
Big Sandy Volunteer Fire Dept	Grant Volunteer Fire Company	Seeley Lake Volunteer Fire Dept
Bigfork Volunteer Fire Dept, Company A	Grasshopper Valley Volunteer Fire Company	Shepherd Volunteer Fire Dept
Bigfork Volunteer Fire Dept, Company B	Greenough/Potomac Volunteer Fire Dept	Sheridan Volunteer Fire Dept
Birdseye Rural Volunteer Fire Dept	Harrison Volunteer Fire Dept	Simms Volunteer Fire Dept
Black Eagle Volunteer Fire Dept	Hawk Creek Rural Volunteer Fire Dept	Smith Valley Volunteer Fire Dept
Blaine County Rural Fire District, Chinook	Heath Rural Fire District	Somers Volunteer Fire Dept
Blaine County Rural Fire District, Harlem	Helmville Volunteer Fire Dept	Somers Volunteer Fire Dept, Lakeside Company
Blaine County Rural Fire District, Hogeland	Heron Rural Fire District	South Kalispell Volunteer Fire Dept
Blankenship Rural Volunteer Fire Dept	Highwood Volunteer Fire Dept	South Toole County Volunteer Fire Dept
Blue Creek Volunteer Fire Dept	Hilger Rural Fire District	St Ignatius Rural Volunteer Fire Dept
Boulevard Volunteer Fire Dept	Hobson Rural Volunteer Fire Dept	St Labre Volunteer Fire Dept
Brady Volunteer Fire Dept	Home Atherton Volunteer Fire Dept	St Marie Rural Volunteer Fire Dept
Bridger Canyon Volunteer Fire Dept	Hot Springs Rural Fire District	St Regis Volunteer Fire Dept
Broadwater County Rural Fire District, Duck Creek	Hungry Horse Volunteer Fire Dept	Stevensville, Burnt Fork Company
Broadwater County Rural Fire District, Radersburg	Hyalite Volunteer Fire Dept	Stevensville, Etna Company
Broadwater County Rural Fire District, Toston	Inverness Volunteer Fire Dept	Stevensville, Sunset Company
Broadwater County Rural Fire District, Townsend	Irvine Flats Fire Company	Stevensville, Westside Company

STATISTICAL SECTION

Volunteer Fire Departments (continued)		
Broadwater County Rural Fire District, Winston	Jefferson City-Community Volunteer Fire Dept	Stockett Volunteer Fire Dept
Bull Lake Volunteer Fire Dept	Jefferson Valley Volunteer Fire Dept	Sula Rural Volunteer Fire Dept
Canyon Creek Fire District	Joliet Volunteer Fire Dept	Sun River Volunteer Fire Dept
Carter Volunteer Fire Dept	Knees Volunteer Fire Dept	Superior Volunteer Fire Dept
Cascade Rural Volunteer Fire Dept	Lewis & Clark County Rural Volunteer Fire Dept	Swan Lake Volunteer Fire Dept
Centerville Volunteer Fire Dept	Libby Rural Volunteer Fire Dept	Swan Valley Volunteer Fire Company
Central Valley Fire Dept, Company A	Libby Rural Volunteer Fire Dept, Company 2	Sweet Grass Volunteer Fire Dept, Company A
Central Valley Fire Dept, Company B	Lima Rural Volunteer Fire Dept	Sweet Grass, Volunteer Fire Dept, Company B
Central Valley Fire Dept, Company C	Lincoln Volunteer Fire Dept	Terra Verde Heights Volunteer Fire Dept
Charlo-Moiese Volunteer Fire Dept	Little Basin Creek Volunteer Fire Dept	Trego-Fortine-Stryker (TFS) Volunteer Fire Dept
Chouteau Rural Volunteer Fire Dept	Lockwood Rural Fire District #8	Thompson Falls Rural Volunteer Fire Dept
Clancy Volunteer Fire Dept	Loma Rural Volunteer Fire Dept	Three Forks Rural Volunteer Fire Dept
Clarks Fork Rural Volunteer Fire Dept	Lost Creek/Antelope Gulch Volunteer Fire Dept	Three Mile Volunteer Fire Dept - Stevensville
Clinton Volunteer Fire Dept	Manchester Volunteer Fire Dept	Treasure County Rural Volunteer Fire Dept
Columbia Falls Rural Volunteer Fire Dept	Manhattan Rural Volunteer Fire Dept	Tri-Lakes Volunteer Fire Dept, Company A
Columbus Rural Volunteer Fire Dept	Marion Volunteer Fire Dept	Tri-Lakes Volunteer Fire Dept, Company B
Conrad Rural Volunteer Fire Dept	Martin City Volunteer Fire Dept	Trout Creek Rural Volunteer Fire Dept
Cooke City-Silver Gate Volunteer Fire Dept	Marysville Volunteer Fire Dept	Troy Rural Volunteer Fire Dept
Coram-West Glacier Volunteer Fire Dept	McCormick Rural Volunteer Fire Dept	Turner Volunteer Fire Dept
Corvallis Rural Fire District	Medicine Lake Volunteer Fire Dept	Twin Bridges Volunteer Fire Company
Craig Volunteer Fire Dept	Melrose Volunteer Fire Dept	Ulm Volunteer Fire Dept
Creston Volunteer Fire Dept, Company #1	Missoula Volunteer Fire Dept, Pumper Company 1	Upper Yak Fire Service
Creston Volunteer Fire Dept, Company #2 Lake Blaine	Missoula Volunteer Fire Dept, Pumper Company 2	Valier Volunteer Fire Dept
Culbertson Volunteer Fire Dept	Missoula Volunteer Fire Dept, Pumper Company 3	Valley County Long Run Volunteer Fire Dept
Cut Bank Rural Volunteer Fire Dept	Missoula Volunteer Fire Dept, Tanker Company 1	Vaughn Rural Volunteer Fire Dept
Darby Volunteer Fire Dept	Missoula Volunteer Fire Dept, Tanker Company 2	Victor Rural Volunteer Fire Dept
Dean Creek Volunteer Fire Dept	Missoula Volunteer Fire Dept, Tanker Company 3	West Fork Rural Fire District
Dearborn Volunteer Fire Dept	Molt Volunteer Fire Dept	West Glendive Volunteer Fire Dept
Del Bonita Rural Volunteer Fire Company	Monarch Volunteer Fire Dept	West Helena Valley Volunteer Fire Dept
Denton Volunteer Fire Dept	Montana City Volunteer Fire Dept, Company 1	West Valley Anaconda Volunteer Fire Dept
Dillon Rural Volunteer Fire Dept, Company A	Montana City Volunteer Fire Dept, Company 2	West Valley Kalispell Volunteer Fire Dept
Dillon Rural Volunteer Fire Dept, Company B	Montealto Volunteer Fire District	Wheatland County Volunteer Fire Dept
Dixon Rural Volunteer Fire Dept	Moore Rural Volunteer Fire Dept	Wibaux Volunteer Fire Dept
Dutton Rural Volunteer Fire Dept	Musselshell County Rural Volunteer Fire Dept	Willow Creek Rural Volunteer Fire Dept
East Glacier Park Volunteer Fire Dept	North Toole County Volunteer Fire Dept	Wilsall Fire Department
East Missoula Rural Volunteer Fire Dept	Noxon Rural Fire District	Winifred Rural Volunteer Fire Dept
East Valley Volunteer Fire Dept	Olney Rural Volunteer Fire Dept	Wisdom Rural Volunteer Fire Dept
Eastgate Volunteer Fire Dept	Opportunity Volunteer Fire Dept	Wise River Volunteer Fire Company
Edgar Volunteer Fire Dept	Ovando Volunteer Fire Dept	Wolf Creek Volunteer Fire Dept
Elk Park Volunteer Fire Dept	Painted Rocks Fire & Rescue Volunteer Fire Company	Wolf Point Rural Volunteer Fire Dept
Elliston Volunteer Fire Dept	Paradise Valley Fire Service	Worden Fire Dept - Company 1
Ennis & Madison Valley Rural Volunteer Fire Dept	Park City Rural Volunteer Fire Dept #2	York Fire Service Area
Eureka Rural Volunteer Fire Dept	Park County Fire Volunteer Dept	
Evergreen Volunteer Fire Dept	Park County Rural Volunteer Fire Dept #1	
Fairfield Rural Volunteer Fire Dept	Pendroy Rural Volunteer Fire Dept	
Ferndale Volunteer Fire Dept	Phillips County Volunteer Fire Dept	



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Glacier National Park in the Fall. Photo by Jacob W. Frank.

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